PERCEIVED IMMIGRATION AND VOTING BEHAVIOR

Davide Bellucci
University of Turin

Pierluigi Conzo[§]
University of Turin & Collegio Carlo Alberto

Roberto Zotti
University of Turin

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ABSTRACT

A growing number of studies have found significant effects of inflows of migrants on electoral outcomes. However, the role of perceived immigration, which in many European countries is above official migration statistics, is overlooked. This paper investigates the effects of perceived threat of immigration on voting behavior, by looking at whether local elections in Italy were affected by sea arrivals of refugees before the election day. While, upon arrival, refugees cannot freely go to the destination municipality, landing episodes were discussed in the media especially before the elections, thereby influencing voters' perceptions about the arrivals. We develop an index of exposure to arrivals that varies over time and across municipalities depending on the nationality of the incoming refugees. This index captures the impact of perceived immigration on voting behavior, on top of the effects of real immigration as proxied for by the stock of immigrants and the presence of refugee centers. Results show that, in municipalities where refugees are more expected to arrive, participation decreases, whereas protest votes and support for extreme-right, populist and anti-immigration parties increase. Since these effects are driven by areas with fast broadband availability, we argue that anti-immigration campaigns played a key role.

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[§] Address correspondence to *Pierluigi Conzo*, Dept. of Economics and Statistics "S. Cognetti de Martiis", University of Turin – Campus Luigi Einaudi, Lungo Dora Siena 100A. Email: pierluigi.conzo@unito.it.

1. INTRODUCTION

Recent national and European Parliament elections across European countries have shown increasing support for far-right and right-wing populist political parties, calling for a rise of nationalism in Europe (e.g. Guiso et al. 2017 and 2018). This political scenario has been exacerbated by the refugee crisis that occurred in the last few years when thousands of migrants arrived on the Greek and Italian coasts as well as at the borders of Germany, Austria and Hungary. As migration became a key issue in the political debate, support to populist and nationalist parties raised. An interesting, yet overlooked issue is to what extent the rise of anti-immigration and populist right-wing parties results from (mis)perceptions of immigration, likely induced by biased news and anti-immigration campaigns, rather than real exposure to (i.e. contact with) migrants.

In many European countries, the perceived presence of immigrants does not match with the data. This is true especially in Italy, where over-estimation of the number of immigrants living in the country is among the highest in Europe[1]. In addition, while in official statistics the actual number of migrants landed in the ports of Italy, Greece and Spain peaked only in October 2015 and declined soon after to its pre-2015 level (UNHCR data, 2018), inflow of immigrants continues to populate the political debate and to influence the public opinion. The frequency of articles in Italian newspapers containing the words "immigrant(s)" and "crime(s)" raised considerably since 2016, whereas refugee arrivals decreased and crime rates remained constant. Furthermore, Eurobarometer data suggest that immigration and terrorism are still the main concerns among European citizens, whereas economy, finance and unemployment have gradually lost importance since 2011. Not surprisingly, natives in Germany, France, Italy, and the UK on average believe that there are between two and three times as many immigrants as there are in reality (Alesina et al. 2018).

This paper focuses on the role of perceived immigration in political competitions. We depart from previous studies based on real immigration statistics (e.g. Dustmann et al. 2018; Steinmayr 2019; Edo et al. 2019), and test whether and how the sea-arrival of refugees before the local elections shaped Italians' voting behavior. While, upon arrival, refugees could not freely go to the destination municipality, landing episodes were largely discussed in the media before the elections, thereby influencing voters' perceptions about the arrivals. Our focus is on local elections in Italy, which ranks among the first countries in Europe not only for over-estimation of immigrants, but also for the rise of populist parties (42 percentage points from 2008 to 2018). Moreover, Italy, jointly with UK and France, is in the bloc of countries where right-wing and populist groups did best in the EU elections in 2019.

[1] Source: Integration of immigrants in the European Union – Eurobarometer (2018).

Our main hypothesis is that, rather than the presence of migrants itself, the perceived threat of (and anxiety about) an inflow of refugees significantly contributed to the decline in turnout and the increase in protest, extreme right-wing and populist votes that has occurred in Italy from 2010 to 2018. Voting preferences, we argue, were gradually shaped not much by the overall share of (regular) immigrants, but, rather, by negative perceptions associated with the inflow of refugees. Arrival episodes gained importance in the media especially before the elections, and were used by far-right parties to represent immigration as a threat for natives. As a consequence, salience of immigration and misperceptions about the severity of the inflows increased, especially where refugees were more expected to arrive, and independently from the stock of immigrants residing in the city.

To assess the impact of perceived immigration on electoral outcomes, we rely on official data on the arrivals of refugees at Italian ports and exploit variation in the nationality composition of the incoming boats, which is (reasonably) exogenous to the local electoral cycle. Thus, we build an index of exposure that varies by municipality and over time: it weights the number of arriving nationalities by time-distance from the (exogenously determined) election day as well as by the share of co-nationals residing in each municipality. Since, after disembarking, refugees cannot freely and immediately reach the desired destination, our index captures the increased salience (and perceived threat) of immigration due to arrival episodes occurred in the weeks preceding the elections. As a matter of fact, voters located far away from the main ports of arrival could know about the refugee inflow only through the media. News and public discussions about the arrivals could therefore increase perception of immigration to a larger (lower) extent where refugees are more (less) expected to go after landing, i.e. in municipalities with a high (low) share of regular migrants having the same nationality as that of the arriving refugees.

We use data on Italian municipal elections from 2010 to 2018, and consider only municipalities that voted twice in this time window. We perform first-differences estimates to net out municipality fixed effects, and control for time-varying factors that may interact with migration inflows and electoral outcomes, i.e. the presence of centers for refugees and asylum seekers, and demographic and economic characteristics of the municipalities. Conditional on the share of regular migrants residing in the municipality and proximity to refugee centers, both capturing *real* exposure to migration, our reduced-form strategy provides estimated impact of *perceived* migration on changes in electoral outcomes. We consider five outcomes separately: turnout, share of protest votes, and share of votes for anti-immigration, populist and extreme-right parties.

Our results show that the increase in perceived exposure to arrivals significantly predicts the negative trend in turnout that Italian municipalities experienced in the last years. It also explains the recent rise in protest and populist votes, as well as the increased consensus gathered by anti-

immigration and extreme-right parties. As expected, these effects are mainly driven by voters in municipalities with wider access to informal media, as proxied for by broadband diffusion; in contrast, voters in municipalities with high newspaper circulation do not react to the arrival episodes before the elections. This finding is consistent with previous studies, which attribute a sizeable part of the rise in populism in Italy to use of internet as main source of political information (Campante et al. 2018; Shaub and Morisi 2019).

The rest of the paper is structured as follows. Section 2 sets the stage for the empirical analysis by discussing misperceptions of migration and the rise of populism, jointly with the institutional and political context. Section 3 discuss the related literature, while Section 4 presents the variables used in the analysis, the data sources and provides descriptive statistics. Section 5 introduces the empirical model. Section 6 shows our baseline results while in Section 7 we show robustness checks and various tests for heterogeneity, which allow to shed lights on the main mechanisms behind our findings. Section 8 concludes.

2. BACKGROUND

2.1 MISPERCEPTION OF MIGRATION AND POPULISM

European countries have recently witnessed an increase in the share of votes for far-right and right-wing populist political parties. The Freedom Party in Austria (26%), the Swiss People's Party in Switzerland (29%), the Northern League in Italy (17.4%), Vox in Spain (10.3%), the Danish People's Party in Denmark (21%), Fidesz in Hungary (49%) are few examples of national parties that have increased consistently their percentage of votes in the most recent national elections[2]. The last European elections have seen nationalist and far-right parties across Europe increasing their political power (especially in Italy, France and United Kingdom) as well as their chances to promote radical anti-euro and anti-immigration policies.

As far as Italy is concerned, the leader of Northern League (the deputy Prime Minister, Matteo Salvini) spearheaded the new government's anti-immigration stance, turning away humanitarian rescue ships from Italian ports. His party has had a long Eurosceptic reputation, and a number of its candidates for the European elections want to leave the eurozone. The arrivals of refugees to European countries has exacerbated such political scenario up to the point that Italian government wants to abolish key forms of protection for migrants, suspend the refugee application process of those who are considered socially dangerous or who have been convicted of a crime, and make it easier for the latter to be deported.

[2] https://www.bbc.com/news/world-europe-36130006.

Although countries are still struggling to absorb migrants' sea arrivals, migration to Europe is going down sharply, whereas the perception that it represents a real crisis is not. In the last years, the actual number of arrivals is back to its pre-peak level, which has been reached in late 2015[3]. Indeed, according to the European Border and Coast Guard Agency, an estimated 150,000 people entered the European Union through irregular crossings in 2018; yet this number represents the lowest total since 2013 and it is 92% below the peak recorded during the 2015 crisis[4]. Nevertheless, the politics of migration still presents Europe as a continent under siege from migrants, even though the numbers depicts a very different picture. For instance, the far-right prime minister of Hungary claimed "we have failed to defend ourselves against the migrant invasion"[5], the Czech prime minister said "there are 700,000 illegal migrants – they need to go home" [6], the German interior minister has threatened to turn back refugees at his country's southern border and wants to close borders[7], and Italy's deputy prime minister and interior minister (also leader of the Northern League) tweeted that the ports have been (and remain) closed[8].

This strategy seems to have reached the awaited consequences as Europeans appear more concerned about immigration than about any other social challenge. In facts, the inflow of immigrants as measured in official records does not often match with subjective estimates of the citizens, which tend to respond to the political debate on migration in the months preceding elections. Official statistics show that, in comparison with other European Union (EU) citizens, Italians have the most biased perceptions ---they over-estimate the share of immigrants living in their country by 18 percentage points (Figure 1). This is not only an Italian issue, since EU respondents, on average, over-estimate the proportion of immigrants in their country by about 10 percentage points. Lack of knowledge about migration could be one of the reasons behind these biased beliefs: when asked how much they were informed about immigration and integration issues, 62% of Italians answered either that they were not at all or not informed, two percentage points above the EU-28 average[9]. Indeed, the little is known about a key topic in the political debate, the higher is the scope for political parties to influence voters' behavior.

[3] According to the island of Lampedusa's mayor (one of the southernmost point of Italy and therefore among the main front line of the crisis), "the number of arrivals has dramatically reduced" such that the place is now as "quietest it's been since 2011" (https://www.nytimes.com/interactive/2018/06/27/world/europe/europe-migrant-crisis-change.html).
[4] See also https://www.bbc.com/news/world-europe-46764500
[5] https://www.kormany.hu/en/the-prime-minister/the-prime-minister-s-speeches/prime-minister-viktor-orban-s-speech-at-a-conference-held-in-memory-of-helmut-kohl.
[6] https://www.theguardian.com/world/2018/oct/25/europe-migrants-need-to-go-home-says-czech-prime-minister
[7] https://www.nytimes.com/2018/06/15/world/europe/germany-merkel-migrants-bavaria-seehofer.html
[8] https://twitter.com/matteosalvinimi/status/1107755836259139585
[9] Source: Integration of immigrants in the European Union – Eurobarometer (2018).

[Figure 1 around here]

In this paper, we argue that voting preferences are not so much shaped by the overall share of (regular) immigrants, but, rather, by the expectation of refugees' inflows, as boosted by news announcing arrival episodes (and by the following public debate). These episodes were, in facts, largely discussed in formal and informal media before the elections. Google Trends statistics show that the frequency of searches of a migration-related topic in Italy tend to follow the electoral cycle (Figure 2)[10]. Google searches containing the Italian words "Sbarchi" (boat landings) or "Migranti" (migrants) seem also to mirror the distribution of the actual arrivals, rising substantially in the month preceding or during the elections, and decreasing thereafter. Data on joint occurrences of the words "Immigrati/o" (immigrant/s) and "Reato/i" (crime/s) in Italian newspapers underlines a gradual mismatch between perceptions and reality: the frequency of these words display an increasing trend, especially after 2016; however, refugee arrivals started to decline in 2016, while the number of immigrant's and native's crimes remained constant for the entire period considered (Figure 3).

Misperceptions of immigrants, likely induced by anti-immigration campaigns spread out in the media, might have therefore played a non-negligible role in electoral outcomes. From a descriptive perspective, countries with the largest share of citizens showing biased estimates of migration are also those in which populist parties have obtained the highest share of votes between 2008 and 2018 (Figure 4). Interestingly, Italy ranks among the first EU countries not only for over-estimation of immigrants, but also for the rise of populist parties, i.e. from around 8% in 2008 to almost 50% in 2018. Greece, Spain, France, Hungary, Czech Republic are other cases in which misperception of migrants and support to national parties are both at high levels.

[Figures 2, 3 and 4 around here]

While informative, this descriptive evidence does not allow to trace a causal link between misperceptions of migration and political outcomes. Our paper contributes in this direction by exploiting (plausible) exogenous variation in the distribution of nationalities in the landing episodes preceding the predetermined election day.

2.2 INSTITUTIONAL AND POLITICAL CONTEXT

[10] Google Trends gives a 0–100 index of interest over time of a given word or phrase, compared to the total number of Google searches done during that time.

Since our study relies on data on Italian municipal elections held from 2010 to 2018, we provide in this section a brief description of the institutional background of the country.

The municipal level of government in Italy includes over 8,000 authorities. The average population size is around 7,000 inhabitants, and the number of cities above 100,000 inhabitants is only around 40; just two of them exceed one million residents, with more than half localities having less than 3,000 residents.

Elections for municipal governments (local council and mayor) take place every five years, with direct election of the mayor in a single or dual ballot depending on resident population size. Cities with more than 15,000 inhabitants have a runoff stage among the two most voted candidates if none of them collects more than 50% of the votes in the first stage. Voters can express a vote for a mayor candidate as well as for a councilor candidate. Two thirds of the council seats are assigned to the councilor candidates that are typically grouped in a list supporting the mayor that is elected. Voting is formally mandatory for all citizens aged above 18, yet no sanctions exist for abstainers.

The electoral schedule across the country is staggered ---several elections occurred in the years considered in this paper and, more importantly, not all the municipalities vote in the same year and at the same time[11]. This feature allows us also to take into account how salience of migration varies according to the time distance between the date of the landing episodes and the date of local elections.

At national level, in the last two decades in Italy there were five parliamentary national elections, i.e. in 2001, 2006, 2008, 2013 and 2018. Two of them (2001 and 2006) were won by the center-right coalition, headed by Mr. Silvio Berlusconi, while the third round (2008) was, instead, won by the center-left coalition, headed by Mr. Romano Prodi. In the fourth round (2013), the Centre-Left Democratic Party led by social democrat Pier Luigi Bersani emerged as the Italian voters' first choice. The Centre-Right alliance, led by Mr. Silvio Berlusconi was the second-most preferred party. An important feature of this election term was the electoral success of the populist party "Five Star Movement", which ranked third in the election.

Finally, in 2018 Italy voted for the first time with a new electoral law, passed by Parliament in the autumn of 2017. The Five Star Movement was the most voted party, while the center-right alliance was the most voted coalition. Within this coalition, the Northern League ("Lega Nord") received the largest share of votes. This party started as a regionalist party in the '90s, with a political agenda focused on fiscal federalism and political autonomy of the Italian northern regions. At the

[11] The exact day of the election is chosen each year by decree of the Minister of Internal Affairs among all Sundays in the period 15 April to 15 June and it is the same for all municipalities that are in the election year. Usually municipal elections are held every five years to replace the mayor, the municipal government and the council. The only case in which a municipality votes with a different schedule is in the case the mayors, or at least half of the councilors, resign before the end of the term. Early termination can be also due to a dissolution for suspected mafia presence in the council, merging with other municipalities and other violations of the law.

beginning of the 2000s, the party reached increasing success in the country, taking the form of a proper nationalist party as other national parties in Europe (e.g. National Front in France, Freedom Party in Austria, AfD in Germany, Danish People's Party in Denmark, Progress Party in Norway). More importantly, this party is associated with anti-euro and anti-immigration campaign. Their leaders have repeatedly promised to expel all illegal migrants from Italy under the slogan "*Italians first"*. Along with Northern League, there are also extreme right parties, such as neo-fascist groups like "Casa Pound" and "Forza Nuova", which openly revive the symbols, vocabulary and ideas of Mussolini-era fascism.

2.3 IMMIGRATION TRENDS AND POLICIES IN ITALY

Upon arrival, migrants receive first aid and assistance in first-level centers set up near to the main places of disembarkation. They are free to exit from first reception centers during the daytime, but they have the duty to re-enter during the night-time. The Protection System for Asylum Seekers and Refugees (SPRAR) centers are the second level of the reception that host refugees coming from the first level of reception. Allocations of asylum applicants from first-reception centers to second-level reception centers are managed by the Home Office through call for tenders. Municipalities that open a SPRAR center receive substantial fiscal grants from higher levels of government. Thus, for a municipal government, opening a reception center may be an investment, with benefits for the local economy (e.g. Gamalerio 2018)[12].

Especially in the first-reception centers, refugees' freedom of movement is rather restricted. This means that the migrants arriving at the Italian ports cannot freely circulate over the territory, and eventually reach their co-national fellows in other municipalities –at least not legally, and not immediately after the landing (upon arrival, refugees enter immediately the formal reception process). This legal feature allows us to restrict the analysis of voting behavior to the arrivals occurred in different time windows preceding the election day. For instance, when looking at the effects of the arrivals one month before the election day, refugees could only be *expected* to arrive since it is very unlikely that they can actually reach their co-nationals in the voting municipality soon after disembarking. Since landings occur mainly in the ports located in the southern regions of Sicily, Calabria, Puglia and Campania, it is very likely that voters living far away from these ports form their

[12] SPRAR was created in 2002 in order to establish a network of local institutions that implement reception projects for forced migrants. The primary objective of SPRAR is to provide support for each individual in the reception system, and make interventions that go beyond the simple distribution of food and housing, by also providing complementary services such as legal and social guidance and support in order to promote socioeconomic inclusion and integration. A fundamental element of those services is the temporary nature of reception, which is intended in all cases to ensure the independence and integration of recipients. The participation of local institutions in the network of reception projects is voluntary.

expectations through formal and informal media, and feel more vulnerable to immigration the higher is the share of migrants in their municipality having same nationality as that of the incoming refugees.

Thus, controlling also for the share of resident migrants in the municipality and for the presence of SPRAR centers in the province, the effect we measure would capture expectations of (perceptions about) migration, instead of changes in natives' attitudes stemming from direct interactions with immigrants.

3. CLOSELY RELATED LITERATURE

This paper is connected to different strands of literature that focus on the role of migration in shaping voting behavior and electoral outcomes.

A first strand of literature is the political economy of immigration, which aims to explore whether immigration has a positive impact on the support for extreme-right parties and anti-immigration policies. One way to answer these questions empirically is to relate variation in voting outcomes to variation in immigrants' settlement. However, a major challenge in this strategy is that immigrants are not randomly allocated across electoral districts. For instance, they tend to avoid hostile regions, e.g. regions where citizens are likely to vote for far-right candidates, leading to a spurious correlation between immigration and anti-immigration votes. A recent paper by Bracco et al. (2018) studies the effect of far-right parties on the location choice of immigrants in Italy; they find that the election of Northern-League mayors discouraged immigrants from moving into a municipality. On the contrary, Halla et al. (2017) find no evidence that election outcomes in Austria drive immigrant sorting. A widespread strategy to tackle this source of endogeneity rests on instrumenting current immigrant stocks with historical settlement, as pioneered by Altonji and Card (1991)[13]. A common result in this literature is that immigration affects voters' preferences, leading to the rise of anti-immigration parties through a variety of mechanisms, e.g. cultural diversity (Mendez and Cutillaz 2014; Brunner and Kuhn 2018), competition in the labor market and redistributive consequences (Barone et al. 2016; Halla et al. 2017; Edo et al. 2019), concerns over welfare and compositional amenities (Otto and Steinhard 2014; Halla et al. 2017), etc.

Our paper investigates the issue from an alternative perspective, i.e. we assess the role of perceived rather than real immigration. Moreover, while most studies focus on economic migrants, our focus is on refugees – the group that has so dramatically entered the political debate in Europe

[13] Employing a different strategy, Harmon (2018) uses historical housing stock data in order to address the issue of endogenous location choices of immigrants arguing that the share of high-rise buildings in a municipality decades ago provides a valid instrument for the increase in ethnic diversity in more recent times, which is in turn associated with more votes for the extreme right.

and beyond. From the empirical point of view, we exploit municipality-level variation in the nationalities of the refugees landing to Italian coasts before the elections. Since migrants cannot freely decide *where* and *when* to go (neither before nor after leaving), this source of variation is reasonably orthogonal to the local electoral process.

Relying on contact (Allport 1954) or conflict (Key 1949) theories, a slightly different body of the literature has shown that electoral outcomes are affected by proximity to refugee centers (Dustmann et al. 2018; Vertier and Viskanic 2018; Steinmayr 2019; Dinas et al. 2019; Hangartner et al. 2019), which spurs anti-immigration attitudes[14]. Our focus, instead, is on the role of perceived immigration in voting behavior; by controlling for supply of SPRAR in the province, the effect of exposure to arrivals we estimate is net of the confounding effect of proximity to refugees' centers. Similar to Dinas et al. (2019) and Hangartner et al. (2019), we also explore the intensity to exposure to refugees using migrants' boat arrivals to Italian ports. Yet, this paper differs from the aforementioned studies since it explores the role of "potential", rather than "actual" contact with immigrants in voting behavior. In our empirical framework, the refugees' arrivals occurring a few weeks before local elections do not turn into an increase in the number of migrants in the city; thus, there is no scope for real intergroup interactions.

4. VARIABLES, DATA SOURCES, AND DESCRIPTIVE STATISTICS

4.1 SOURCES OF DATA

The main dataset results from a combination of different sources of data. The first part of the dataset reports electoral outcomes of all the Italian municipalities that voted twice in the period from 2010 to 2018, with a distance of 5 years between the first and the second election. The dataset gathers information on the day of election, electorate and electoral turnout, blank and null ballot papers, number of candidate mayors and the share of votes all the parties[15]. We merge this information with data on municipality characteristics, i.e. total population, share of migrants and taxable income, which have been downloaded from the Italian National Statistical Institute (ISTAT)'s website.

[14] In line with the predictions of the contact theory (Allport 1954), the presence of individuals characterized by different backgrounds may help to reduce prejudice towards foreigners due to the intercultural interchange between communities. Therefore, in presence of certain conditions such as equal status of the groups, presence of common goals, cooperation between the groups and support of authorities, direct or mass-mediated contact with immigrants may reduce support for anti-immigration parties and help to improve attitudes towards migration. In these situations, the larger the fraction of immigrants already present in an area, the lower would be the threat natives perceive from additional immigrants, which would probably be reflected in less support for a far-right party. However, as suggested by the conflict theory put forward by (Key 1949) immigrants could be perceived, instead, as a threat to the culture of the native population, generating a sense of collective prejudice and disadvantage. Under these circumstances, natives living in high-immigrant areas perceive higher threat from additional immigrants and will be more opposed to refugee allocation, leading to an increase in votes for the center-right coalition and in support to political ideas less favorable to immigrants.

[15] The dataset is available from the Italian Ministry of Interior at the website: https://elezionistorico.interno.gov.it

The second dataset contains detailed information on immigrants' arrivals through boat arrivals at Italian ports. For each landing episode, we gather information on the day and place of arrival, the total number of persons landed, and its composition in terms of nationalities[16].

We also collect information at province level on SPRAR. Specifically, for each year in our dataset, we gather information on presence of SPRAR centers across Italy and on the number of available beds of each center. Although the number of available beds does not faithfully represent the actual presence of immigrants (some of the centers might be under or overcrowded), this variable may nevertheless proxy for hosted refugees' presence. This information is publicly accessible consulting the annual reports and documents published on the SPRAR website[17].

Along with this data, we extract information at province level (i.e. NUTS-3 level) on unemployment rate of the working age population (i.e. individuals aged 15 and over) and on crime rates (per electorate) from ISTAT[18]. We also collect data about the number of newspapers sold at province level, which is publicly provided by ADS Institute (Accertamenti Diffusione Stampa)[19]. To construct our measure of news diffusion, we consider only daily and weekly newspapers with national coverage[20].

The last source of data is the AGCOM website (Autorità per la Garanzia nelle Comunicazioni), which provides data about broadband diffusion at province level. In particular, this database allows us to compute the share of households at province level with an ADSL connection, and to group them depending on their average download speed (< 30 Mbps; <100 Mbps; >100 Mbps).

4.2 THE "EXPOSURE TO ARRIVALS" INDEX

In order to capture the effect of perceived immigration on electoral outcomes, for each municipality we construct an index of exposure to immigrants arrived at Italian ports. We exploit the plausibly exogenous match between nationalities in the boats approaching the Italian ports before the elections and the nationalities residing in the voting municipalities.

First, we compute the shares of immigrants of nationality *j* in municipality *i* as the ratio between the number of immigrants of nationality *j* and the total number of immigrants in the municipality *i*. Then, as shown in equation (1) below, in the time period between the 1st of January

[16] Data have been kindly provided by Statistic Office of the Ministry of Interior - Dipartimento Libertà Civili e Immigrazione.
[17] www.sprar.it/pubblicazioni
[18] We compute the crime rate at province level as the ratio between the total number of crimes reported by the police in a given province, over the annual-regional average of the number of crimes.
[19] http://www.adsnotizie.it/_dati_certificati.asp
[20] Specifically, we extract aggregated information on the diffusion of main Italian newspapers such as il Corriere della Sera, La Repubblica, Il Sole 24 Ore, Il Mattino, La Stampa, Il Tempo, Il Tirreno, Il Messaggero, and Il Fatto Quotidiano. ADS is accessible through its website at following link http://www.adsnotizie.it/index.asp

and the election day, for each municipality *i* and for each single ship landing *k*, we sum up these shares for nationalities *j* of immigrants arriving in boat *k* that are represented also in the municipality *i*. We consider nationality *j* as represented in municipality *i* if the municipality has at least one resident migrant of the nationality *j* at the time of the landing.

Then, for each arrival *k*, we sum up the number of arriving immigrants whose nationality matches with that in the municipality *i* ($Immigrants_{j,k}$), and multiply it by the sum of shares of immigrants with matching nationalities in that municipality ($ShareImmigrants_{j,k}$). This step is important for our estimation strategy since it allows to exploit within-year, across-municipality variation in exposure to arrivals: municipalities with a large (small) share of official migrants whose nationality matches with those of the incoming migrants are more (less) exposed to the arrivals.

To take into account the time distance between the date of arrival and the date of election, we also weight the index by the inverse of 1 plus the logarithm of the number of days between the day of arrival and the day of election ($WDistance_k$).

The resulting index is a measure of municipal exposure to each single boat landing *k* occurred in the period preceding the election. The final exposure index is an arithmetic average of the exposure indices calculated for each single arrival episode *k*.

In sum, our exposure index is a measure of intensity of exposure at municipal level that considers both the share of migrants in the municipality and the number of entrant migrants, whenever their nationality matches. It can be interpreted as the average number of incoming immigrants expected to arrive in the municipality, because of boat landings before elections.

$$Exposure\ Index_i = \frac{\sum_{j,k} Immigrants_{j,k} * ShareImmigrants_{j,i} * WDistance_k}{N_k} \qquad (1)$$

We compute the index considering different time windows. In the first version we consider all the boat landings occurred in the period between the beginning of the year and the day of election (usually in May). In the second version, we restrict our attention to the 30 days before the election day. Then, we repeat the procedure focusing on arrivals relative to the second and third month before the election day, i.e. we compute the index considering all the landings that occurred between 30 and 60 days, and between 60 and 90 days before the election[21]. As a robustness check, we also calculate the index

[21] The following example clarifies the procedure. Consider 2 municipalities *A* and *B*. Municipality *A* has 5 immigrants of nationalities *x,* 10 *y,* and 5 *z*. Municipality *B* has 10 immigrants of nationalities *x,* 20 *q,* and 20 *w*. Suppose that, before the election day, there are two ships landing on the Italian coasts (*1* and *2)*. *Boat landing 1* counts 20 immigrants of nationality *x,* 30 of nationality *y,* and 50 of nationality *q*. *Boat landing 2* instead is composed by 20 immigrants of nationality *x, 20* of nationality *y,* 20 *q* and 20 *w*. Then, municipality *A* has an index of exposure equal to 33,75 (67,5/2), while municipality *B* of 51 (102/2). A possible concern this index does not directly consider the relative weight of the immigrant population with respect to the total population. Two municipalities with the same number and type of foreign

expanding the time-window so to include all landing episodes occurred 30, 60 or 90 days before the elections. In all the empirical specifications, we use a logarithmic transformation of the index (i.e. $\ln(1 + Exposure\ Index_i)$) to account for the high frequency of values that are close to zero.

4.3 ELECTORAL OUTCOMES

Turnout and votes distribution *per-type* of votes are our main outcome variables. Turnout is calculated as the ratio between number of valid votes and the total electorate. Valid votes are computed as the difference between the number of people who voted, net of blank and null ballot papers. Electorate is the number of individuals entitled to vote.

Distribution of votes allows us to directly observe political preferences of citizens. We group votes into four non-mutually exclusive categories, and compute their relative share of votes. Firstly, we consider protest vote, which groups together null and white votes.

Secondly, we use anti-immigration votes (i.e. the sum of preferences expressed in favor of right and extreme-right parties[22]). To categorize anti-immigrants parties, we group together all those parties characterized by a strong rhetoric against immigrants and ethnic minorities, that publicly refer to migration flows as a concern for the national security, that aim at national borders closure, and that place domestic population in a position of primacy against foreign citizens[23].

Thirdly, we consider populist votes as the sum of votes in favor of populist parties. To distinguish between populist and mainstream parties we mainly rely on the seminal work by Van Kessel (2015), who classifies as populist those parties whose political ideas hinge mainly i) on the distinction between *"*the people", referred to as the unique good part of the society, and *"*the elite*"*, ii) on the supremacy of the former over the latter, and iii) on motives of national sovereignty[24]. Finally, we also take into account Northern League coalition, i.e. the sum of all the votes directly collected by "Lega" and strictly related parties[25]. Different definitions of populism are discussed and used as further robustness checks in Section 7.5.

4.4 DESCRIPTIVE STATISTICS

Our dataset contains municipalities that voted twice in the time period between 2010-2018 at a distance of five years from the first to the second election. We have 2803 municipalities, for a total

nationalities could be equally exposed even if one of the two hosts more migrants than the other in relative terms. As a potential remedy, we control for both the size of the electorate and the share of regular migrants residing in the municipality.

[22] Extreme right parties are Casapound, Forza nuova, Movimento Sociale Italiano and Alleanza Nazionale.

[23] The group includes Lega, Forza Nuova, Casa Pound, Movimento Sociale Italiano and Alleanza Nazionale

[24] Populist parties are Forza Italia, Il Popolo delle libertà, Lega and Movimento 5 Stelle.

[25] Lega list contains votes expressed for Lega, Lega Nord and Lega Padana.

of 5606 observations. From 2010 to 2018, Italy has been intensively exposed to immigrants' arrival. During this period there have been 29,242 boat landings, with a total of 725,915 immigrants reaching the Italian coasts. The majority of them arrived between 2014 and 2017 (Figure 2).

As far as the exposure index is concerned, Figure 5 shows its distribution across Italian municipalities in the first election round election (years 2010 – 2013, Panel A), and in the second election round (years 2015 – 2018, Panel B). More specifically, our exposure index averages at 1.4 and varies from a minimum value of 0, due either to the absence of migrants within the municipality or to the lack of matches between nationalities of arrived and resident migrants, to a maximum of 32.15, recorded in Brognaturo (Vibo Valentia) in 2017. Reflecting arrivals on Italian coasts, our index of exposure grows steadily across all macro-area from 2012 to 2017, to sharp decline in 2018 (Figure 6, Panel A). As illustrated in Figure 6, Panel B, on average, northern Italy is the area mainly exposed to the arrivals as measured by our index.

On average, roughly 2 out of 3 citizens voted in the municipal elections (67.6%). As reported in Figure 7, Panel A, average turnout steadily declined since 2010. The decline in voters' turnout couples with an increase in the share of protest votes, which has grown sensibly since 2011, reaching the peak in 2017 elections (Figure 7, Panel B).

On average, the share of votes in favor of anti-immigration parties is 4.4%, with peaks of 100% as in Moriago della Battaglia (Treviso) in 2018, or Rovere' Veronese (Verona) in 2011. The share of populist votes follows a similar pattern, with an average of 5.9% of preferences and a maximum of 73.7% in the aforementioned municipalities. However, as shown in Figure 8, Panel A, votes in favor of extreme-right and populist parties has grown dramatically since 2015 in Italy. The most pronounced increase has been registered in northern and central Italy, while islands are less inclined to vote for extreme-right and populist parties over the period considered (Figure 8, Panel B).

[Figures 5, 6, 7 and 8 around here]

The number of available beds in SPRAR centers averages to around 340 units per municipality, while the share of resident migrants averages at 7.5%. Ageing index, calculated as the ratio between the share of elder individuals (i.e. over 65 years) and the share of pupils and children (i.e. from 0 to 14 years), is a compact index informing about the age structure of the municipality. It ranges from 0.24 to 56. As of criminality, proxied for by the number of reported crimes, provinces in our sample suffered, on average, 3.6 crimes per electorate. The province of Milan is the most problematic, with more than 18 thousand crimes recorded by police in 2012. For what concern unemployment rates, northern regions of Italy are historically those that on average enjoy lower rates. In particular, the

province of Cuneo (Piemonte) in 2010 had a very low rate, less than 4%. By contrast, southern regions suffer it most. Several provinces, mostly in Calabria and Sardinia, reached levels of unemployment greater than 30% in 2015. Taxable income follows a very similar pattern, with northern regions being richer than central and southern areas, with Milan registering a taxable income of more than 300 million euro in 2011. Finally, regarding news diffusion, over the time period considered, around 20 newspapers per electorate per day are sold on average at the province level. The province of Rome ranks first in newspaper circulation, registering a total of more than 340 thousand journals sold in 2010. Provinces with lower newspapers circulation are concentrated in Calabria and Sardinia in 2018.

Finally, we use data on average download speed of household in 2017 across Italian provinces to proxy for quality and diffusion of internet connection, thereby capturing access to information through (social) media. More than half of the families surf the Internet with a speed lower than 30 Mbps, while almost 21% browse with an average speed between 30 and 100 Mbps. Those who enjoy fast internet connection represent 10% of the sample (9% between 100 and 500 Mbps, 1% faster than 500). The rest of households (12%) does not have any internet connection available at home.

See Table 1 for the descriptive statistics and Table A1 in Appendix for further details on the construction of variables.

[Table 1 around here]

5. THE EMPIRICAL STRATEGY

To investigate the impact of immigration on extreme voting, we estimate the following equation:

$$\Delta Votes_{it} = \beta_1 \cdot \Delta Exposure\ Index_{it} + \beta_2 \cdot \Delta Share\ of\ migrants_{it} + \beta_3 \cdot \Delta Municipality\ Characteristics_{it} + \delta_t + \Delta\epsilon_{it} \quad (2)$$

The dependent variable is the difference in turnout, protest votes or vote shares for anti-immigrant, populist and Northern League parties between two elections at municipal level. For example, $\Delta Votes_{it} = (turnout)_{it} - (turnout)_{i,t-1}$ in case the dependent variable is political participation.

We measure the change in the exposure to migration at municipality level by $\Delta Exposure\ Index_{it} = Exposure\ Index_{it} - Exposure\ Index_{i,t-1}$ where $Exposure\ Index_{it}$ is our treatment variable defined in eq. (1), expressed in natural logarithm.

We measure the change in immigrant share at municipal level as $\Delta Share\ of\ migrants_{it} = Share\ of\ migrants_{it} - Share\ of\ migrants_{i,t-1}$, where $Share\ of\ migrants_{it}$ is the population

share of immigrants (excluding those with Italian citizenship) living in municipality i at time t; this variable allows us to control for the pre-existing presence of migrants at municipal level.

Municipality characteristics is a vector including, as first differences, *Total SPRAR beds,* i.e. the total number of available beds in SPRAR centers at province level as proxy for presence of refugee centers, which allows us to control for the effect that direct contact with refugees and asylum seekers through refugee allocation has on voting behavior; *Electorate,* i.e. the number of individuals entitled to vote at municipal level, which takes into account the changes in the size of the electorate due, for instance, to the historical variation in the dimension of the cohorts entering the electorate for the first time; *Number of mayors,* i.e. the number of mayor candidates at the elections at municipal level, which allows to control for political competition (higher values imply higher competition); *Share of taxable income greater that 120,000 euro,* i.e. the share of citizens with annual personal taxable income greater that 120,000€, which takes into account that political support for immigration may change with individual income. Finally, in order to capture demographic dynamics, we also include an *Ageing index,* i.e. the ratio between the share of elder individuals over 65 years old and the share of children between 0 and 14 years old. All these controls are included for each municipality i at time t.

We also include a vector of time fixed effects δ_t to control for common factors specific to each year such as, for instance, the business cycle. Municipality fixed effects are differenced out in first-difference panel estimations. In all the specification, standard errors are clustered at province level to account for within-province error correlation.

The main parameter of interest is β_1, which identifies the effect of the change in the exposure to migration across municipalities on changes in the electoral outcome. When also dependent variables are expressed in logarithms, it provides time elasticities, i.e. the percentage point change in the electoral outcome in response to a 1 percentage increase in exposure to arrivals from the previous elections.

Endogenous sorting of immigrants does not represent a serious concern in our framework. It is unlikely that, in each landing episode preceding the election date – which has been exogenously determined –, the composition of the incoming nationalities is affected by the *local* political process. For this type of sorting to be a problem, refugees should be able to schedule the day and choose the destination city in response to the political process in that city. We can exclude this possibility because, at the departure, migrants do not enjoy freedom of choice regarding the day of leaving and the day and place of arrival: such decisions depend mainly on the informal shipping industry managed by local smugglers. Allocations to second-level refugee centers (SPRAR), instead, is managed by

Home Office. In other words, migrants could not exactly know *when* they will travel, *when* they will land, and *whether* and *when* they will eventually reach the municipality they intend to go.

Controlling also for the share of regular immigrants and presence of SPRAR centers, our treatment variable (exposure index) would therefore capture to what extent the *threat* of a refugee crisis – as clamored in pre-electoral campaigns – affected voting behavior.

6. RESULTS

6.1 *PERCEIVED IMMIGRATION AND POLITICAL PARTICIPATION*

This section investigates the effects of intensity of migration exposure on political participation. The dependent variable is the turnout rate at municipal level. Table 2 reports the estimates for our main coefficient of interest, e.g. exposure index. We start by measuring the index taking into account all the arrivals occurring from the beginning of the year to the election day (Table, 2 Column 1), and subsequently experiment with shorter time spans such as 1, 2 or 3 months (Table 2, Columns 2, 3 and 4), which would further restrict the possibility that refugees legally or illegally reach the municipality.

Results highlight that the increase in exposure to immigration causes a decrease in turnout, suggesting that the recent trends in immigration may have contributed to a surge of disaffection toward political participation. It could be the case, as suggested by Barone et al. (2016), that part of the center and left-wing voters, who are ideologically more in favor of a multiethnic society but are not happy about the immigration trends and regulations, might have decided not to vote instead of directly voting for the center-right coalition[26]. This result is also confirmed by Edo et al. (2019) who find that high immigration increases abstention rates (i.e. lower turnout).

To further explore the nexus between subjective exposure to migration and political participation, we also consider, as dependent variable, the number of blank and invalid ballots. If citizens are not satisfied with any of the existing political parties and their immigration policies, then we should also expect an increase in protest votes. Accordingly, we find that exposure has a positive effect on the share of blank/invalid votes (Table 3), which is consistent with the idea that the prospect of incoming refugees, as presented in the pre-electoral debate throughout the media, has contributed to an increase in dissatisfaction with how ruling parties address the issue (see again Barone et al. 2016 for a similar result).

[26] In a different setting, Dustmann et al. (2018) document, instead, that a higher share of allocated refugees leads to a higher share of individuals voting (e.g. increase turnout) in municipality elections but not in Parliamentary election. Steinmayr (2019) finds that turnout is not significantly affected by hosting refugees in a municipality. Dinas et al. (2019) show that overall turnout increased significantly in Greek islands receiving refugees, suggesting that the refugee crisis also acts as mobilizer of new voters who previously had not participated in elections.

[Tables 2 and 3 around here]

6.2 PERCEIVED IMMIGRATION AND SHARE OF VOTES

This section investigates the effects of the intensity to migration exposure on support for populist and far-right candidates. The parameter of interest now identifies the effect of the change in the exposure to migration across municipalities on the change in votes for anti-immigration parties (Table 4), populist parties (Table 5) and Northern-League candidates (Table 6). As before, we measure the index taking into account all the migrants' arrivals in the months preceding the election day, and then with shorter time spans (one, two, or three months). Results show a positive effect of perceived immigration on votes for center-right coalitions, which have a political platform less favorable to immigrants.

More specifically, Table 4 summarizes the results when the share of votes for anti-immigration parties is considered as dependent variable. Exposure to migration increases support for anti-immigration parties when the index takes into account of all the arrivals from January 1st to the election day. When we restrict the time span of arrivals, we find that exposure to migrants drives the electoral outcome only when we consider the influx of refugees within a month from the date of the elections, consistent with the idea that anti-immigration campaigns affects voting behavior especially when elections are approaching.

Table 5 shows that the increase in the share of votes for populist parties is driven by exposure to arrivals independently from the time-window considered to measure arrivals; however, as expected, we find a higher coefficient especially when only the arrivals in the 4 weeks preceding the elections are considered (Table 5, Column 2).

Finally, Table 6 summarizes results for the share of votes for the Northern League. In this case, the sample is restricted to municipalities in the North macro-area, where the party enjoys higher consensus. Results document that exposure to arrivals increased support for the right-parties when the index includes all the arrivals since the beginning of the year; however, the effect is mainly driven by the exposure to arrivals occurring four weeks before the elections (Table 6, Column 2), suggesting again that what matters is perceived (media-influenced) rather than actual immigration.

[Tables 4, 5 and 6 around here]

7. HETEROGENEITY AND ROBUSTNESS CHECKS

7.1 HETEROGENEOUS EFFECTS: THE ROLE OF MEDIA EXPOSURE

The proposed mechanism underlying our results is the increased salience of (and anxiety for) immigration through formal and informal media coverage of arrivals during electoral campaigns. We therefore study the role of media first by looking at local newspapers in disseminating information to voters in order to test whether the effect of exposure varies with availability of news. We split the sample according to per electorate newspapers sales below and above the median value, which has been computed for each region and year separately[27].

Local newspapers either directly report news on migrants' boat arrivals or interview politicians in order to comment on refugees' allocation policies. They often host pre-electoral propaganda of competing parties. By doing so, they lower the cost of information, and increase both the number of informed voters and, perhaps, the quality of the information they have (Drago et al. 2014; Repetto 2018). Therefore, we expect that municipalities where newspapers are more widespread are less sensitive to pre-electoral arrivals of refugees. We find that the negative effect of arrivals on participation and support to anti-immigration and populist parties is mainly driven by municipalities with below-median diffusion of newspapers (Table 7, Column 1, 3, 5 and 7).

[Table 7 around here]

The second test for media exposure hinges on data on expansion of broadband coverage. When we split the sample for values of connection speed below and above the median in the region, we find that the effect of subjective exposure to immigration increases with the speed of the available connection (Table 8).

[Table 8 around here]

Results on newspaper and internet availability, jointly considered, provide support to our main hypothesis: the inflow of refugees affected voters' behavior through access to (often biased) informal media, rather than through personal interactions with immigrants. The effect of exposure to perceived inflows of refugees is in fact higher in municipalities where most citizens tend to substitute traditional (and potentially more informative) media with internet as the main source of political information (Gentzkow 2006; Campante 2017; Shaub and Morisi 2019).

7.2 HETEROGENEOUS EFFECTS ACROSS COMMUNITIES: THE ROLE OF CRIME

[27] We define the median for each region separately because using the national level median would essentially divide the sample in north and south (see Repetto 2018).

A possible channel behind the effect of migration exposure on far-right voting is the perception that immigration can increase the level of criminal activities (Bianchi et al. 2012; Barone et al. 2016). To test this source of heterogeneity, we split the sample in tertiles according to the values of crime per electorate in the region. The higher the crime rate in a given municipality, the higher may be the perception (often influenced by mass media) that immigrants are associated with criminal activities, thereby leading to high support for right-wing parties. However, we could also expect an opposite result if residents of high-crime areas are less sensitive to a marginal increase in delinquency expected from the arrival of migrants.

Results, summarized in Table A2 in Appendix, show that only in low-crime municipalities there is a slightly positive and significant relationship between migration exposure and protest votes (Table A2, Panel B). Instead, in those municipalities, a stronger positive relationship exists between migration exposure and anti-immigration and populist votes (Table A2, Panels C and D). This evidence suggests that increased sensitivity to arrival episodes characterizes municipalities that are less exposed to crime.

7.3 CHARACTERISTICS OF THE MUNICIPALITIES: POPULATION & UNEMPLOYMENT

Evidence in the literature on immigration and political attitudes and electoral outcomes suggests that municipality size matters. Immigration inflows produce large increases in the votes obtained by far-right parties especially in small towns, while leaving large towns mostly unaffected (Barone et al. 2016; Dustmann et al. 2018). We therefore split the sample according to the municipality's population size below and above the 90th percentile as in Dustmann et al. (2018).

Results in Table A3 in Appendix show that, consistent with previous studies, the main effect of exposure to arrivals is not significant in the largest cities. There are different explanations to this finding (Barone et al. 2016; Dustmann et al. 2018). First, in larger cities, natives and migrants tend to live far away from each other, and therefore there is less need for the former to compete with the latter for local public services. Second, weaker competition is expected also in the labor market, since more skilled workers usually tend to concentrate in larger cities. Third, larger cities attracted migrants before the smallest ones; therefore, residents of the former are more accustomed to ethnic diversity, and adapted earlier to the positive and negative sides of immigration.

All these explanations suggest that in big cities people tend to develop positive attitudes towards refugees. Therefore, it is not surprising to find that they do not react significantly to the pre-electoral inflow of immigrants and to the anti-immigration rhetoric associated with the arrivals.

Furthermore, economic theory suggests that changes in attitudes of natives towards migrants and the increased support to anti-immigration parties are driven by concerns on labor-market

opportunities. Since those providing substitutable skills might lose the most from migration, low-skilled immigration is perceived as problematic: the native-immigrant contest for jobs might be tougher for unskilled native workers. Therefore, we would expect that support for right-wing parties is higher in municipalities characterized by high unemployment, and hence by a stronger (expected) labor market competition. To further this issue, we use data on unemployment at province level splitting the sample in tertiles according to the values of unemployment in the region (for a similar analysis see Halla et al. 2019).

Results in Table A4 in Appendix show that, consistent with previous studies, the main effect of exposure to arrivals has the strongest impact on far-right voting in communities with high unemployment (Table A4, Panel C and D). This is consistent with the idea that immigration hurts natives supplying production factors closely substitutable by those of the immigrants. Therefore, far-right parties might be more appealing for voters who can lose the most from immigration. As a consequence, the relative economic insecurity associated with the possibility of hosting refugees would push voters in high unemployment areas towards far-right, populist parties in response to immigration episodes (Halla et al. 2019).

7.4 COMPETITION FOR PUBLIC SERVICES

Immigration also has an impact on public finance and policies (Halla et al. 2017). Indeed, the expected financial burden associated with low-skilled immigrants, who are those more likely to be net recipients of welfare (Otto and Steinhardt 2014), would also increase electoral support for anti-immigration parties. Increased immigration has negative effects on natives' attitudes towards redistribution, driven by voters supporting center- and the right-wing parties (Dahlberg et al. 2012). If more immigrants are expected to arrive in their city, natives might expect stronger competition for public services, such as compositional amenities stemming from neighborhoods, schools, and workplaces, thereby increasing anti-immigration sentiments (Edo et al. 2019). The prospective increase in immigration rates could be associated with a huge rise in the share of immigrant relative to native children. This could further increase future competition between immigrants and natives for public services for children. For instance, areas with a high share of the population in early schooling may be more sensitive to arrivals of migrants if natives believe that immigrants will get priority in admission to schools.

To assess the role of competition for public services, we split the sample by the share of children aged 0-15 (see for a similar analysis Barone et al. 2016). The intuition is that the higher the share of native children, the higher may be the perception that immigrants, for instance, can "steal" admission to school from the natives' set of rights. More specifically, we divide municipalities below

and above the median share of 0-15 children in the region. Results, reported in Table A5 in Appendix, provide scarce support for this channel: migration exposure increases vote for the far-right parties both below and above the median presence of children.

7.5 AN ALTERNATIVE DEFINITION OF POPULISM

One limit to the use of Van Kessel's strategy to group populist parties is that it focuses exclusively on parties with political representation in the national parliament[28]. Therefore, strictly relying on Van Kessel's classification would imply to consider as non-populist a set of minor parties that instead fit well the criteria.

Another widely used benchmark to identify populist parties is the Chapel Hill Expert Survey (CHES)[29]. The 2017 survey scores 132 political parties in 11 European countries, over a long list of dimensions, through questionnaires conducted with experts about European political parties. The survey uses experts' opinion to estimate the ideological and political positions of each representative party. Aassve et al. (2018), for example, consider as populist those parties with an average score higher than 6, over a maximum value of 10, on the question "the people, not politicians, should make the most important decisions". However, also CHES only focuses on political parties that are representative at national level.

In order to overcome this limit, as in Aassve et al. (2018), we look at parties' political program and include in the list of populist parties a number of other minor parties that: i) concurred in municipal elections, ii) according to our judgement, satisfy Van Kessels' conditions, and iii) score higher than 6 on the aforementioned CHES question. The parties we include are: Casa Pound, Il Popolo della Famiglia (both right wing parties), and Potere al Popolo (left wing). Although often present in media, considered together these parties collected less 3% of preferences in last Italian elections (held in March 2018).

Importantly, our main results using these alternative definitions of populism do not change substantially (Tables A6 and A7 in Appendix).

7.6 MAGNITUDE

When the dependent variables are expressed in logarithms, β_1 in eq. 2 measures the percentage point change in the electoral outcome in response to a 1% change in the index of exposure to migration.

[28] Van Kessel lists as populist parties Lega Nord, Movimento 5 Stelle, Fratelli d'Italia and Popolo delle Libertà.
[29] The unique difference between Van Kessel and Chapel Hill Expert Survey (CHES), is that the latter consider as populist only Lega Nord, Movimento 5 Stelle and Fratelli d'Italia.

Results in Table A8 in Appendix show that an increase in exposure by 1% from previous elections decreases turnout by about 1.6% points, while it increases protest votes by 0.5% and votes for anti-immigration, populist and League parties by 0.8%, 2% and 1.2%, respectively.

7.7 DIFFERENT TIME-WINDOWS

As an additional robustness check, we re-estimate our baseline models with an alternative version of the exposure index. More specifically, we extend the time-period from the election day to the arrivals so to include all the arrivals occurred 60 or 90 days before the elections. This version of the index differs from the previous one because these new time windows include also the arrivals occurred later in time (and close to the election day).

Results, reported in Tables A9a-b in Appendix, suggest that estimated effect of exposure does not seem to vary substantially across the different time-windows considered. This evidence underlines that our exposure index measures the effects of the anti-immigration campaign, rather than the effects of the real inflow of refugees that might have occurred (legally or illegally) after the arrivals. For real inflow to matter, we should expect a significant increase in the coefficient of the exposure index when expanding the time-window to 60 or 90 days before the elections, i.e. considering a larger time-span so to include regular or irregular refugees who might have reached the municipality after landing. However, we do not find empirical support for this hypothesis since the effect of exposure does not vary substantially when including arrivals occurred 60 o 90 days before the elections.

8. CONCLUSIONS

This paper aims to understand the effects of perceived immigration on voting behavior in Italy. To this purpose, we rely on a reduced-form identification strategy that exploits two main sources of exogenous variation. First, we rely on the predetermined calendar of mayoral elections occurring every five years, and according to a staggered electoral schedule, across the about 2,700 Italian municipalities. Second, we build an index of exposure that exploits the (plausibly) exogenous variation in the nationality of immigrants approaching the Italian ports from 2010 to 2018. In each year, exposure to arrivals varies at the intensive margin across municipalities, with more (less) exposed cities having larger (lower) share of regular immigrants with the same nationality of those approaching the Italian coasts before the elections.

Since we also control for the share of regular immigrants, our reduced-form estimates capture the additional role that the arrival episodes, widely announced and discussed in the media before the

elections, played on voting behavior. We claim that it is not the actual share of immigrants that favor disaffection towards political participation and the rise of populist or far-right parties; it is, rather, the perception of migration, influenced by anti-immigration campaign populating formal and informal media, that played a key role in voting behavior.

The main results show that perceived exposure to arrivals decreases turnout, whereas it increases protest votes and support for extreme-right, populist and anti-immigration parties. Tests for heterogeneity of the effect provide further insights into the mechanisms underlying our results.

First, we find that the impact of perceived immigration is driven by voters who are less likely to read newspapers and more exposed to a fast internet connection. Since supporters of mainstream parties tend to rely more on the traditional media as main sources of political information (Shaub and Morisi 2019), these results suggest that the effect of refugees' arrivals can be due to crowding-out of internet over traditional (and potentially more informative) media as main source of political information (e.g. Gentzkow 2006; Campante 2017). Overall, this evidence provides support to our hypothesized pathway from exposure to arrivals to electoral outcomes: it is the increased salience of (and anxiety for) immigration during electoral campaigns, rather than the personal contact with immigrants, that spurred the changes in voting behavior observed in the last years.

Second, large cities, where citizens tend to have more positive attitudes towards immigration, are less sensitive to the prospect of an inflow of refugees. Third, exposure to arrivals explains the rise of anti-immigration parties mainly in low-delinquency municipalities, where citizens are perhaps more sensitive to the increase in crime envisaged by far-right politicians. Fourth, we find a stronger effect of perceived immigration in high-unemployment areas, where the prospect of an increase in labor-market competition associated with the future inflow of refugees offered larger support to far-right and nationalist parties.

These results, jointly considered, suggest that, as immigration became central in electoral disputes, misperceptions about the issue, jointly with perception of insecurity due to the socio-economic costs of hosting refugees, raised. Representation of immigration as a permanent crisis in the media, even though this was not always the case, spurred or reinforced such negative perceptions, and raised voters' disappointment about mainstream parties. By losing trust in the ruling right- or left-wing parties, citizens reduced political participation and increased protest or populist votes (Barone et al. 2016; Guiso et al. 2017 and 2018; Algan et al. 2018). However, strong anti-immigration campaigns were successful for far-right parties, which, by emphasizing the severity of the arrivals and proposing severe restrictions to solve the "refugee crisis", obtained larger support in the cities where refugees were more expected to arrive.

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TABLES

Table 1 – Descriptive statistics

Variable	Obs	Mean	Std.Dev.	Min	Max
Turnout	5605	.643	.115	.139	.961
Turnout (log)	5606	-0.46	0.20	-1.98	-0.04
Share of anti-immigrants votes	5606	.044	.12	0	1
Share of anti-immigrants votes (log)	5606	.037	.099	0	.737
Share of populist votes	5606	.058	.132	0	1
Share of populist votes (log)	5606	.050	.108	0	.737
Share of populist votes (including minor parties)	5606	.059	.132	0	1
Share of populist votes (including minor parties) (log)	5606	.051	.109	0	0.737
Share of Lega coalition votes	5606	.042	.12	0	1
Share of Lega coalition votes (log)	5606	.036	.098	0	.737
Share of protest votes	5605	.051	.044	0	.811
Share of protest votes (log)	5605	.049	.039	0	.594
Electorate	5606	7941.768	32380.95	79	1010000
Number of mayors	5592	4.274	4.855	1	41
Exposure index	5606	1.403	2.725	0	32.152
Exposure index 30 days before	5606	4.671	8.645	0	97.367
Exposure index 30-60 days before	5606	2.482	6.324	0	82.605
Exposure index 60-90 days before	5606	2.54	5.808	0	66.279
Exposure index 0-60 days before	5606	3.511	6.738	0	76.323
Exposure index 0-90 days before	5606	3.322	6.433	0	73.411
Exposure index (log)	5606	.562	.689	0	3.501
Exposure index 30 days before (log)	5606	1.015	1.099	0	4.589
Exposure index 30-60 days before (log)	5606	.665	.879	0	4.426
Exposure index 60-90 days before (log)	5606	.674	.917	0	4.209
Exposure index 0-60 days before (log)	5606	.897	.988	0	4.348
Exposure index 0-90 days before (log)	5606	.876	.966	0	4.310
Share of household with annual income > 120k	5427	.03	.044	0	.464
Total SPRAR beds	5606	338.813	684.754	0	5165
Total SPRAR beds (log)	5606	4.5	1.992	0	8.55
Ageing index	5426	2.833	3.086	.235	56
Share of migrants	5420	.075	.078	.001	.752
Share of migrants (log)	5420	.07	.067	.001	.561
No. of reported crimes (per electorate)	5606	3.684	6.207	0.011	87.032
Crimes rate I tertile (per electorate)	5606	.341	.474	0	1
Crimes rate II tertile (per electorate)	5606	.331	.470	0	1
Crimes rate III tertile (per electorate)	5606	.326	.479	0	1
News diffusion (per electorate)	5604	20.005	66.607	0.020	1849.03
News diffusion above median value (per electorate)	5604	.494	.500	0	1
Share of household with 2<ADS≤30 Mbps	5426	.538	.378	0	1
Share of household with 30<ADS≤100 Mbps	5426	.208	.278	0	1
Share of household with 100<ADS≤500 Mbps	5426	.087	.159	0	.854
Unemployment rate (aged 15 and over)	5606	11.862	5.849	3.341	31.456
Unemployment rate I tertile	5606	.449	.497	0	1
Unemployment rate II tertile	5606	.342	.475	0	1
Unemployment rate III tertile	5606	.208	.406	0	1
Year 2010	5606	.093	.29	0	1
Year 2011	5606	.195	.396	0	1
Year 2012	5606	.127	.333	0	1
Year 2013	5606	.085	.28	0	1
Year 2015	5606	.093	.29	0	1
Year 2016	5606	.195	.396	0	1
Year 2017	5606	.127	.333	0	1
Year 2018	5606	.085	.28	0	1
North Italy	5592	.406	.491	0	1
Center Italy	5592	.124	.33	0	1
Southern Italy and Islands	5592	.469	.499	0	1

Table 2 – Exposure to arrivals and turnout

	(1)	(2)	(3)	(4)
	Dependent Variable: *Turnout*			
Exposure index (log)	-0.009***			
	(0.003)			
Exposure index 30 days before (log)		-0.005**		
		(0.002)		
Exposure index 30-60 days before (log)			-0.007***	
			(0.002)	
Exposure index 60-90 days before (log)				-0.006***
				(0.002)
Total SPRAR beds	0.000*	0.000**	0.000*	0.000*
	(0.000)	(0.000)	(0.000)	(0.000)
Share of migrants	0.005	-0.004	0.005	-0.007
	(0.034)	(0.035)	(0.033)	(0.032)
Electorate	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Number of mayors	0.007***	0.007***	0.007***	0.007***
	(0.001)	(0.001)	(0.001)	(0.001)
Taxable income share > 120,000	-0.084	-0.087	-0.084	-0.084
	(0.073)	(0.073)	(0.073)	(0.072)
Ageing index	0.000	0.000	0.000	0.000
	(0.001)	(0.001)	(0.001)	(0.001)
Constant	0.588***	0.587***	0.589***	0.589***
	(0.017)	(0.017)	(0.017)	(0.017)
Observations	5,396	5,396	5,396	5,396
R-squared	0.415	0.414	0.415	0.415
Number of municipalities	2,706	2,706	2,706	2,706

Robust standard errors in parentheses clustered at province level. All models include year dummies.
*** p<0.01, ** p<0.05, * p<0.1

Table 3 – Exposure to arrivals and protest votes

	(1)	(2)	(3)	(4)
	Dependent Variable: *Share of protest votes*			
Exposure index (log)	0.005**			
	(0.002)			
Exposure index 30 days before (log)		0.003		
		(0.002)		
Exposure index 30-60 days before (log)			0.004***	
			(0.002)	
Exposure index 60-90 days before (log)				0.003**
				(0.001)
Total SPRAR beds	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Share of migrants	0.016	0.023	0.015	0.024
	(0.025)	(0.026)	(0.025)	(0.024)
Electorate	-0.000**	-0.000**	-0.000**	-0.000**
	(0.000)	(0.000)	(0.000)	(0.000)
Number of mayors	-0.003***	-0.003***	-0.003***	-0.003***
	(0.001)	(0.001)	(0.001)	(0.001)
Taxable income share > 120,000	0.004**	0.004**	0.003**	0.004**
	(0.002)	(0.002)	(0.002)	(0.002)
Ageing index	0.025	0.026	0.024	0.025
	(0.031)	(0.031)	(0.030)	(0.031)
Constant	0.074***	0.075***	0.073***	0.073***
	(0.011)	(0.011)	(0.011)	(0.011)
Observations	5,396	5,396	5,396	5,396
R-squared	0.041	0.039	0.041	0.040
Number of municipalities	2,706	2,706	2,706	2,706

Robust standard errors in parentheses clustered at province level. All models include year dummies.
*** p<0.01, ** p<0.05, * p<0.1

Table 4– Exposure to arrivals and share of anti-immigration votes

	(1)	(2)	(3)	(4)
	Dependent Variable: *Share of votes for anti-immigration parties*			
Exposure index (log)	0.009***			
	(0.003)			
Exposure index 30 days before (log)		0.009***		
		(0.002)		
Exposure index 30-60 days before (log)			0.002	
			(0.002)	
Exposure index 60-90 days before (log)				0.001
				(0.003)
Total SPRAR beds	0.000**	0.000**	0.000**	0.000**
	(0.000)	(0.000)	(0.000)	(0.000)
Share of migrants	0.025	0.015	0.050	0.055*
	(0.029)	(0.030)	(0.031)	(0.032)
Electorate	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Number of mayors	-0.002**	-0.002**	-0.002**	-0.002**
	(0.001)	(0.001)	(0.001)	(0.001)
Taxable income share > 120,000	-0.080	-0.079	-0.076	-0.076
	(0.124)	(0.123)	(0.124)	(0.124)
Ageing index	-0.005***	-0.005***	-0.005***	-0.005***
	(0.002)	(0.002)	(0.002)	(0.002)
Constant	0.047**	0.044**	0.050**	0.051**
	(0.022)	(0.022)	(0.023)	(0.023)
Observations	5,397	5,397	5,397	5,397
R-squared	0.042	0.045	0.040	0.040
Number of municipalities	2,706	2,706	2,706	2,706

Robust standard errors in parentheses clustered at province level. All models include year dummies.
*** p<0.01, ** p<0.05, * p<0.1

Table 5 – Exposure to arrivals and share of populist votes

	(1)	(2)	(3)	(4)
	Dependent Variable: *Share of votes for populist parties*			
Exposure index (log)	0.024***			
	(0.005)			
Exposure index 30 days before (log)		0.016***		
		(0.003)		
Exposure index 30-60 days before (log)			0.014***	
			(0.003)	
Exposure index 60-90 days before (log)				0.011***
				(0.003)
Total SPRAR beds	-0.000	-0.000*	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Share of migrants	0.024	0.031	0.047	0.073
	(0.041)	(0.040)	(0.044)	(0.046)
Electorate	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Number of mayors	-0.002	-0.002	-0.002	-0.001
	(0.002)	(0.002)	(0.002)	(0.002)
Taxable income share > 120,000	-0.147	-0.140	-0.144	-0.142
	(0.137)	(0.137)	(0.138)	(0.137)
Ageing index	-0.006***	-0.006***	-0.007***	-0.006***
	(0.002)	(0.002)	(0.002)	(0.002)
Constant	0.082*	0.082	0.085*	0.084*
	(0.049)	(0.050)	(0.049)	(0.048)
Observations	5,397	5,397	5,397	5,397
R-squared	0.055	0.055	0.050	0.048
Number of municipalities	2,706	2,706	2,706	2,706

Robust standard errors in parentheses clustered at province level. All models include year dummies.
*** p<0.01, ** p<0.05, * p<0.1

Table 6 – Exposure to arrivals and share of votes for Northern League party

	(1)	(2)	(3)	(4)
	Dependent Variable: *Share of votes for Northern League*			
Exposure index (log)	0.015*			
	(0.008)			
Exposure index 30 days before (log)		0.015**		
		(0.006)		
Exposure index 30-60 days before (log)			0.003	
			(0.005)	
Exposure index 60-90 days before (log)				0.003
				(0.006)
Total SPRAR beds	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Share of migrants	-0.049	-0.063	-0.013	-0.010
	(0.052)	(0.053)	(0.055)	(0.055)
Electorate	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Number of mayors	-0.007***	-0.007***	-0.007***	-0.007***
	(0.002)	(0.002)	(0.002)	(0.002)
Taxable income share > 120,000	-0.168	-0.164	-0.165	-0.164
	(0.181)	(0.179)	(0.182)	(0.182)
Ageing index	-0.005**	-0.005**	-0.005**	-0.005**
	(0.002)	(0.002)	(0.002)	(0.002)
Constant	0.119***	0.110***	0.129***	0.129***
	(0.026)	(0.025)	(0.027)	(0.028)
Observations	2,264	2,264	2,264	2,264
R-squared	0.080	0.084	0.078	0.078
Number of municipalities	1,137	1,137	1,137	1,137

Robust standard errors in parentheses clustered at province level. All models include year dummies.
*** p<0.01, ** p<0.05, * p<0.1

Table 7 – Exposure to arrivals and turnout: the role of newspaper diffusion

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Dependent Variables:	Turnout		Protest votes		Share of vote for anti-immigration parties		Share of vote for populist parties		Share of vote for Northern League	
	≤median	>median	≤median	>median	≤median	>median	≤median	>median	≤median	>median
Exposure index 30 days before (log)	-0.005**	-0.005	0.003**	0.002	0.008***	0.005	0.020***	0.007	0.008	0.012
	(0.002)	(0.004)	(0.001)	(0.003)	(0.002)	(0.004)	(0.004)	(0.005)	(0.006)	(0.010)
Total SPRAR beds	0.000***	0.000	-0.000***	0.000	-0.000	0.000***	-0.000**	-0.000	-0.000	0.000**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Share of migrants	-0.064	0.054	0.058**	-0.012	0.064	-0.024	0.075	-0.022	0.017	-0.089
	(0.038)	(0.062)	(0.029)	(0.048)	(0.048)	(0.038)	(0.065)	(0.047)	(0.094)	(0.057)
Electorate	0.000	-0.000***	-0.000***	0.000*	0.000	0.000***	-0.000	0.000***	-0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Number of mayors	0.004***	0.021***	-0.001*	-0.012***	-0.002**	-0.004	-0.002	-0.002	-0.006***	-0.010
	(0.001)	(0.005)	(0.001)	(0.003)	(0.001)	(0.002)	(0.002)	(0.003)	(0.001)	(0.006)
Taxable income share > 120,000	-0.054	-0.087	0.058	0.008	0.121	-0.260	-0.032	-0.273	0.159	-0.366
	(0.086)	(0.085)	(0.049)	(0.040)	(0.100)	(0.192)	(0.141)	(0.189)	(0.149)	(0.243)
Ageing index	0.001	-0.000	0.002*	0.004**	-0.012***	-0.002	-0.016***	-0.002	-0.016***	-0.002
	(0.002)	(0.001)	(0.001)	(0.002)	(0.003)	(0.002)	(0.004)	(0.002)	(0.004)	(0.002)
Constant	0.588***	0.711***	0.064***	0.024	0.079***	-0.071**	0.167***	-0.162**	0.198***	-0.109
	(0.016)	(0.032)	(0.011)	(0.030)	(0.024)	(0.033)	(0.055)	(0.064)	(0.028)	(0.131)
Observations	2,738	2,658	2,738	2,658	2,738	2,659	2,738	2,659	1,145	1,119
R-squared	0.540	0.378	0.069	0.068	0.081	0.031	0.119	0.026	0.133	0.065
Number of municipalities	1,415	1,377	1,415	1,377	1,415	1,377	1,415	1,377	586	575

Robust standard errors in parentheses clustered at province level. All models include year dummies.
*** p<0.01, ** p<0.05, * p<0.1

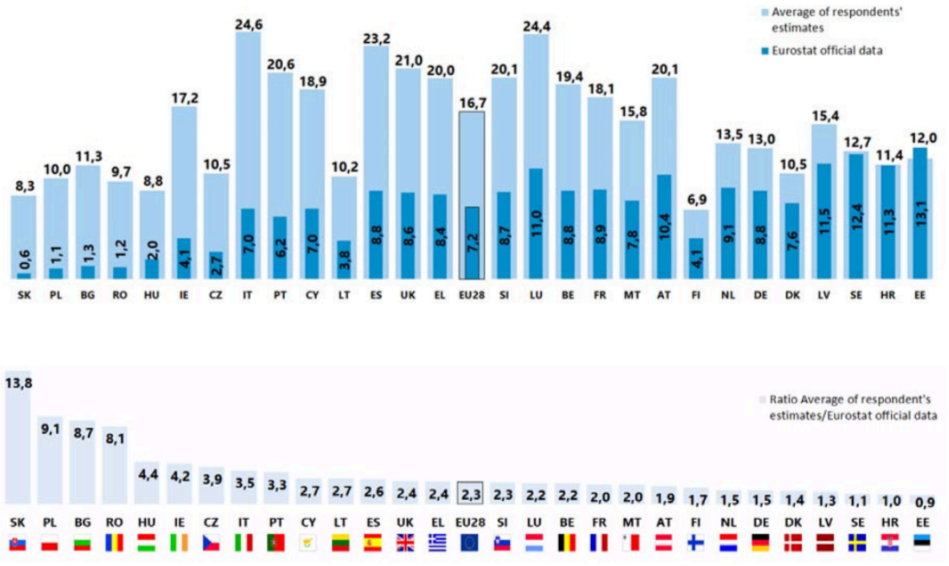
Table 8 – Exposure to arrivals and electoral outcomes: the role of internet diffusion

		(1)	(2)
Electoral outcome:	% hh with adsl speed (in 2018):	≤ regional median	> regional median
Turnout			
	2-30 mbps	-0.009**	-0.001
		(0.003)	(0.003)
	30-100 mbps	-0.004	-0.006*
		(0.003)	(0.003)
	100-500 mbps	-0.003	-0.008***
		(0.003)	(0.003)
Share of protest votes			
	2-30 mbps	0.006*	-0.000
		(0.003)	(0.002)
	30-100 mbps	0.001	0.004
		(0.002)	(0.003)
	100-500 mbps	0.001	0.006*
		(0.002)	(0.003)
Share of anti-immigration votes			
	2-30 mbps	0.012***	0.003
		(0.004)	(0.003)
	30-100 mbps	0.003	0.015***
		(0.003)	(0.005)
	100-500 mbps	0.003	0.011**
		(0.003)	(0.004)
Share of populist votes			
	2-30 mbps	0.025***	0.003
		(0.005)	(0.003)
	30-100 mbps	0.005*	0.025***
		(0.003)	(0.006)
	100-500 mbps	0.005*	0.019***
		(0.003)	(0.006)
Share of Northern League			
	2-30 mbps	0.030***	0.003
		(0.010)	(0.007)
	30-100 mbps	0.004	0.040**
		(0.006)	(0.015)
	100-500 mbps	0.006	0.024*
		(0.006)	(0.014)

Regression coefficients and std. errors from estimates of the electoral outcome on exposure to arrivals. Robust standard errors in parentheses clustered at province level. *** p<0.01, ** p<0.05, * p<0.1

FIGURES

Figure 1 – Actual versus perceived: the proportion of immigrants in each EU country

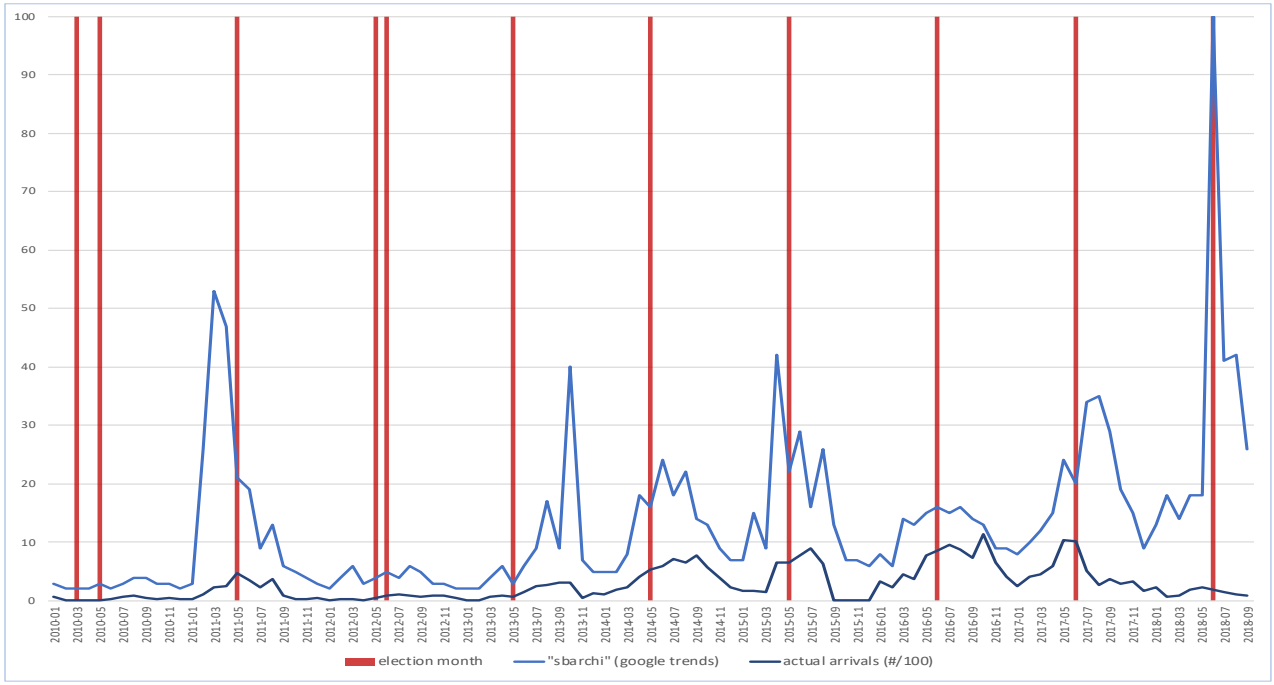


Base size: 19,957 (respondents who gave an estimate of the proportion of immigrants in the total population in their country)

Source: Integration of immigrants in the European Union – Eurobarometer (2018)

Figure 2 - Google Search of the words “Sbarchi” (boat landing), Panel A, and “Immigrati” (immigrants), Panel B, compared with actual arrivals.

Panel A



Panel B

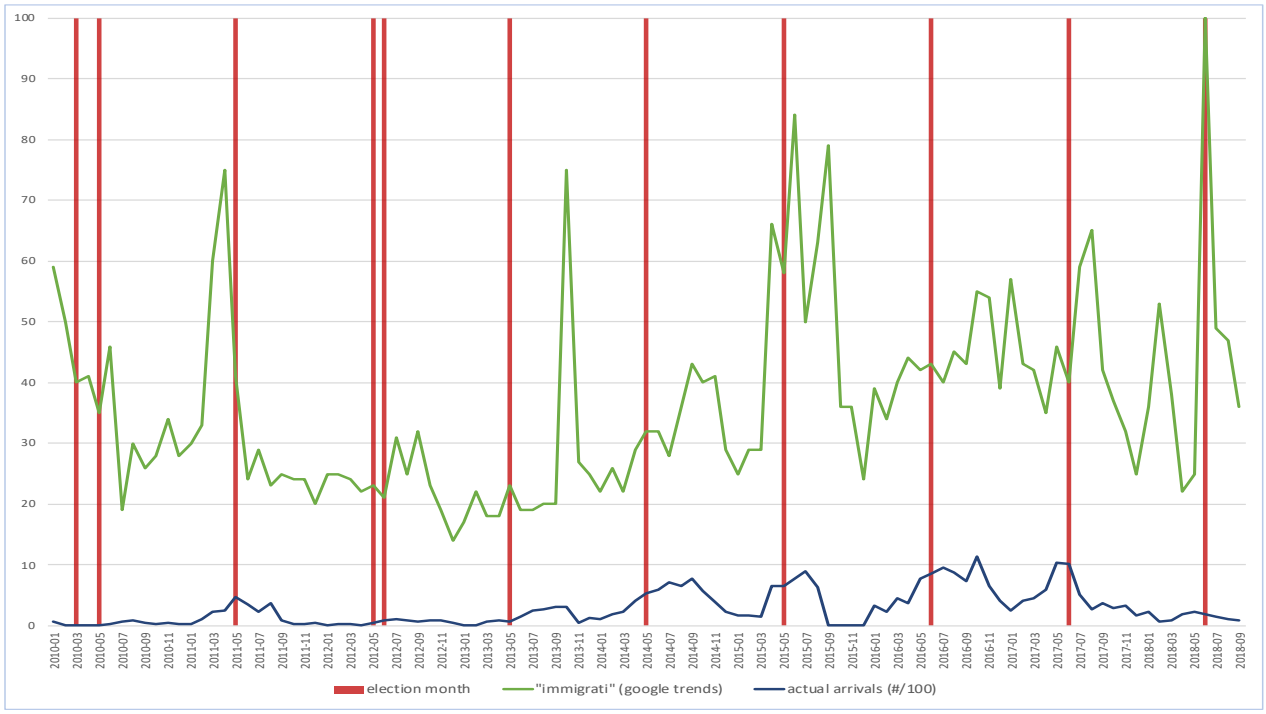
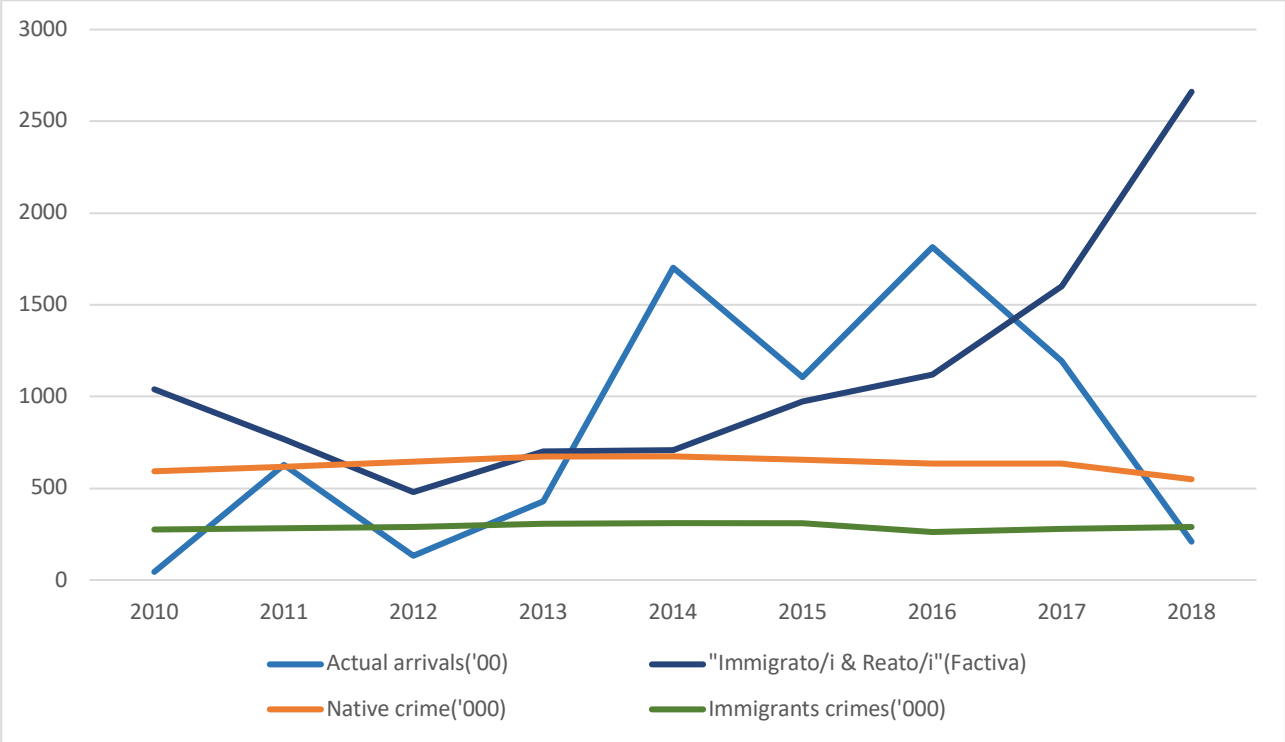
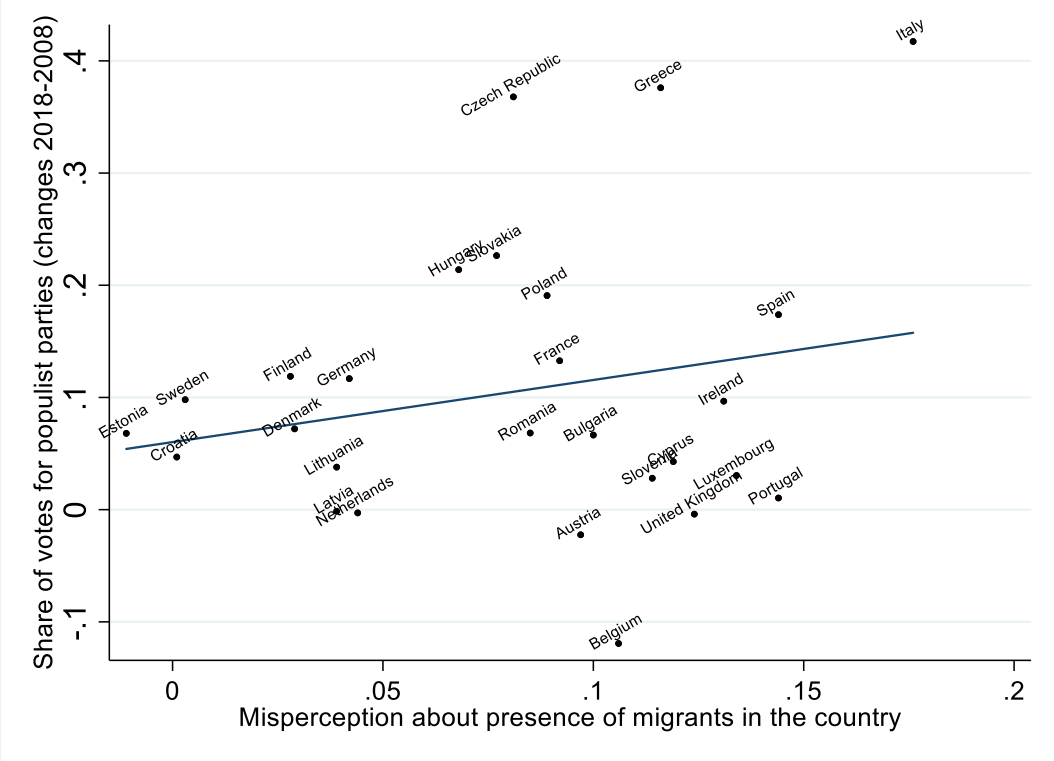


Figure 3 – Occurrences of the words “Immigrato/i” (immigrant/s) and “Reato/i” (crime/s) in newspaper articles, compared with refugee arrivals and crimes committed by natives or immigrants



Notes: The variable “Immigrato/i &/or Reato/i” counts the number of times the words “immigrato” (immigrants) and “reato” (crime), or their respective plurals jointly appear within a phrase written in the main Italian newspaper and news websites, across the years 2010 – 2018. They are constructed by means of a FACTIVA search. “Actual arrival” and “Native crimes” report the number of immigrants arrived on Italian shores and the number of crimes reported by the police, respectively, across the years 2010 – 2018, in thousands.

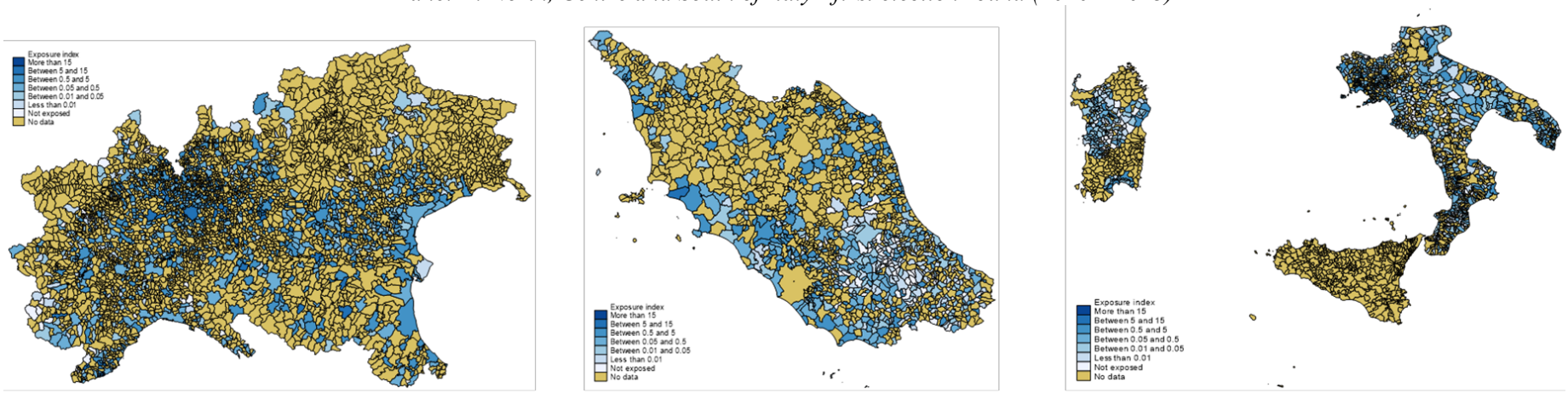
Figure 4 – Growth of populist parties share and misperception of immigration, 2008-2018



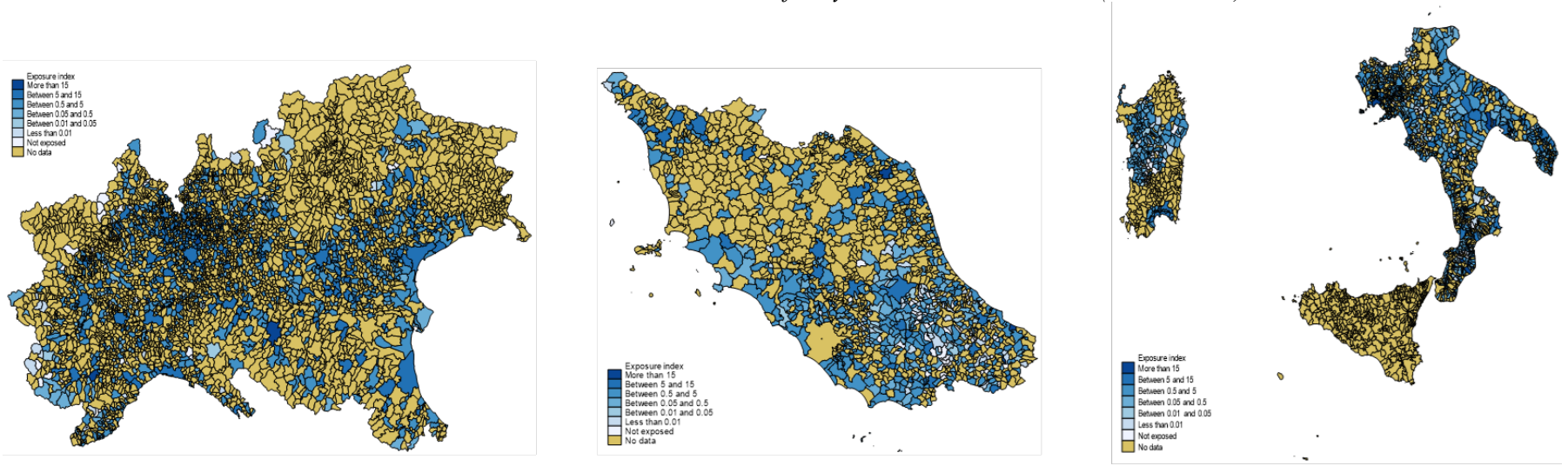
Sources: https://www.euronews.com/2018/03/15/explained-the-rise-and-rise-of-populism-in-europe; Integration of immigrants in the European Union – Eurobarometer (2018)

Figure 5 - Distribution of the exposure index across Italian municipalities in the first and the second election round

Panel A: North, Centre and South of Italy - first election round (2010 – 2013)



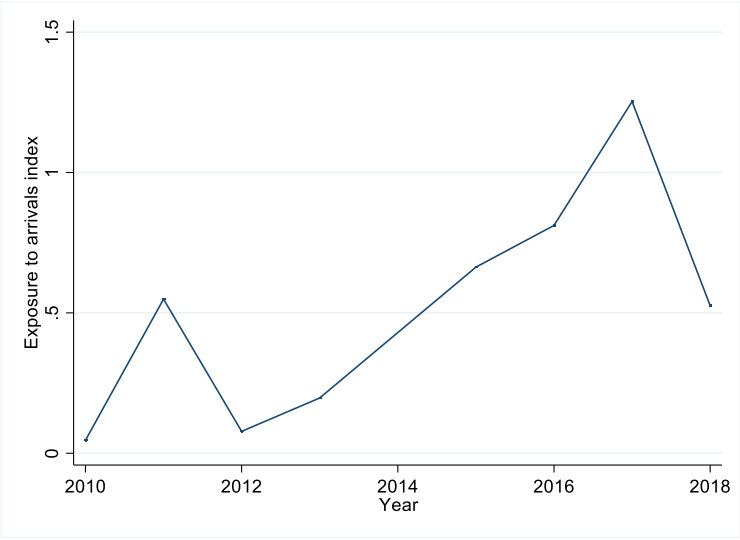
Panel B: North, Centre and South of Italy - second election round (2015 – 2018)



Source: Our elaboration, based on population composition per nationality at municipal level and ship landing data

Figure 6 – Evolution of exposure to arrivals

Panel A



Panel B

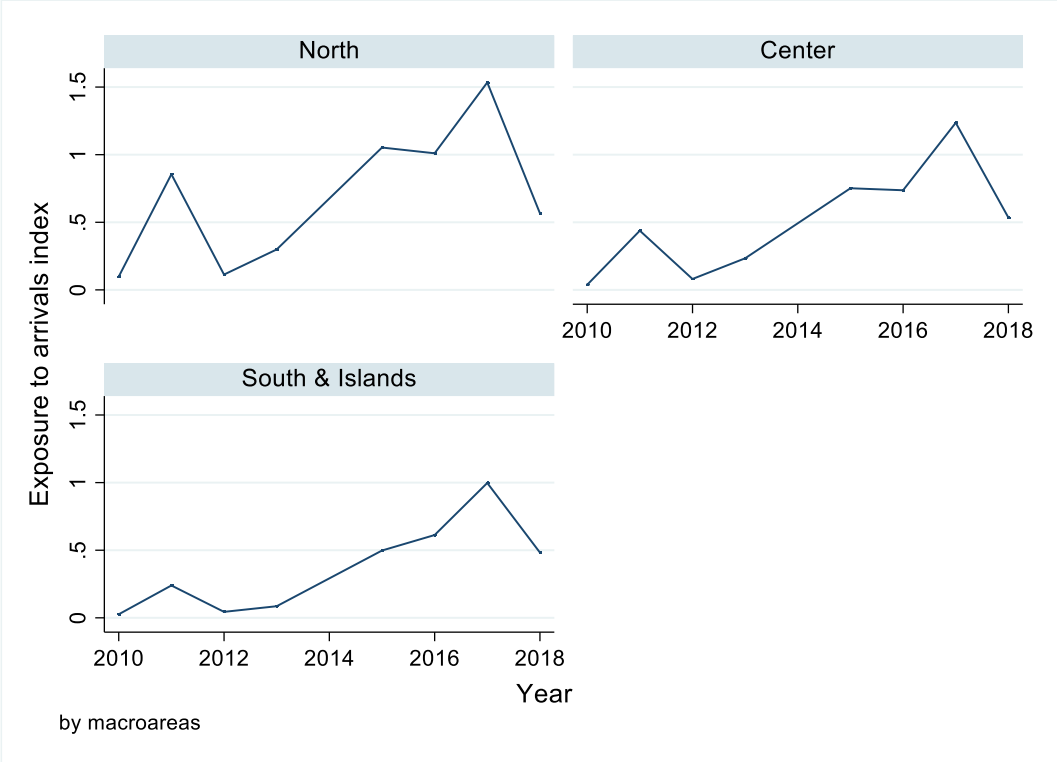


Figure 7 – Turnout and protest votes

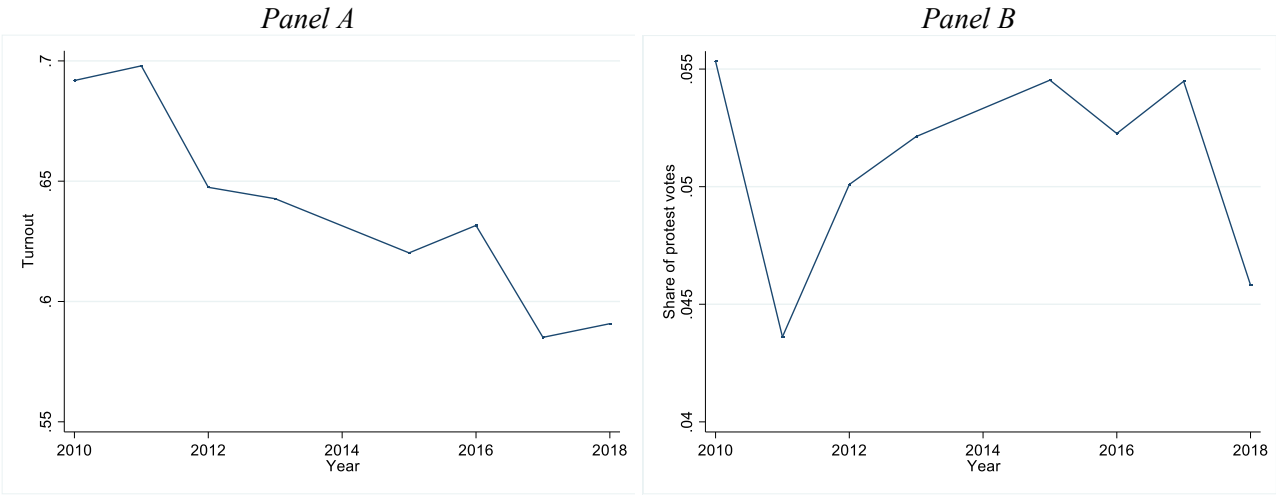
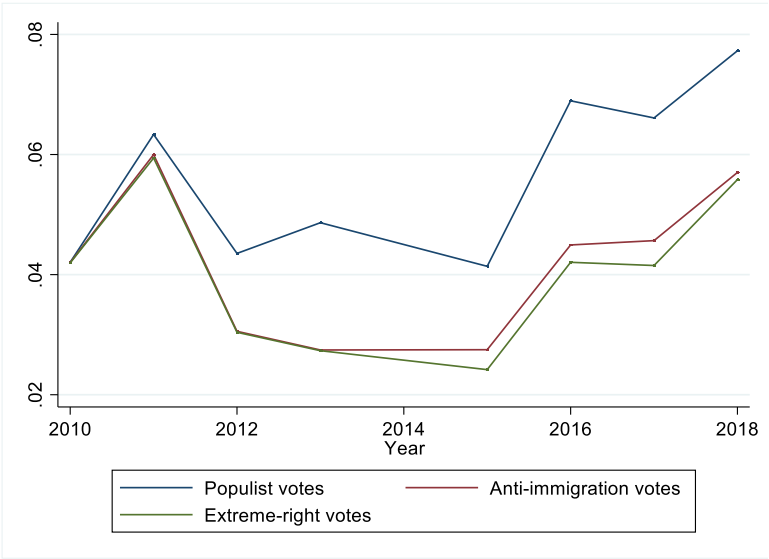
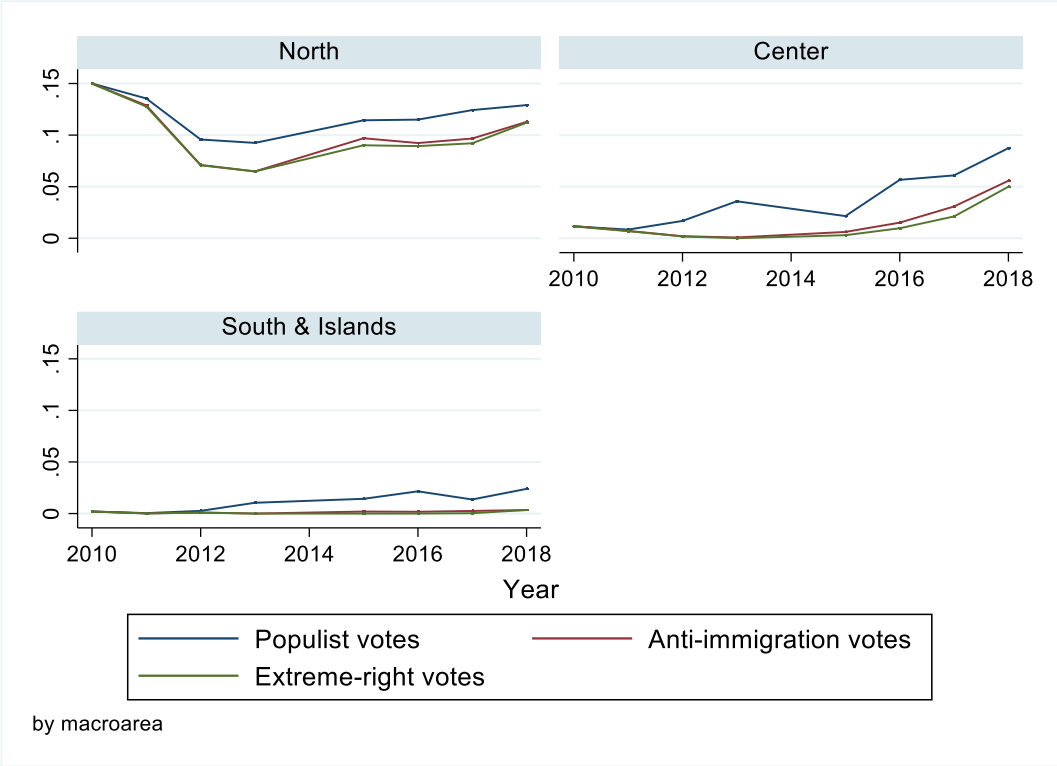


Figure 8 – Populist, extreme-right and anti-immigration votes

Panel A



Panel B



APPENDIX

Table A1 – Variable legend

Variable	Description
Turnout	Reports the share of individuals entitled to vote at municipal level who went voting at the election, net of the null and void ballot papers
Share of anti-immigrants votes	Share of votes expressed in favor of Casa Pound, Forza Nuova, Movimento Sociale Italiano and Alleanza Nazionale
Share of anti-immigrants votes (log)	Logarithmic transformation of Share of anti-immigrants votes
Share of populist votes	Share of votes expressed in favor of Forza Italia, Il Popolo delle libertà, Lega and Movimento 5 Stelle
Share of populist votes (log)	Logarithmic transformation of Share of populist votes
Share of populist votes (including minor parties)	Share of votes expressed in favor of Forza Italia, Il Popolo delle libertà, Lega, Movimento 5Stelle, Casa Pound, Il Popolo della Famiglia and Potere al Popolo.
Share of populist votes (log) (including minor parties)	Logarithmic transformation of Share of populist votes (including minor parties)
Share of Lega coalition votes	Share of votes expressed in favor of Lega, Lega Nord and Lega Padana
Share of Lega coalition votes (log)	Logarithmic transformation of Share of Lega list
Share of protest votes	Share of white, null and void ballot papers
Share of protest votes (log)	Logarithmic transformation of Share of protest vote
Electorate	Number of individuals entitled to vote at municipal level
Number of mayors	Number of mayor candidates at the election
Exposure index	Index of exposure to immigrants' arrivals. Captures the perception of new entrant immigrants at municipal level
Exposure index 30 days before	Index of exposure to immigrants' arrivals calculated in the 30 days preceding the election
Exposure index 30-60 days before	Index of exposure to immigrants' arrivals calculated between 30 and 60 days preceding the election
Exposure index 60-90 days before	Index of exposure to immigrants' arrivals calculated between 60 and 90 days preceding the election
Exposure index 0-60 days before	Index of exposure to immigrants' arrivals calculated between the election day and 60 days preceding the election
Exposure index 0-90 days before	Index of exposure to immigrants' arrivals calculated between the election day and 90 days preceding the election
Exposure index (log)	Logarithmic transformation of the index of exposure to immigrants' arrivals
Exposure index 30 days before (log)	Logarithmic transformation of the index of exposure to immigrants' arrivals calculated in the 30 days preceding the election
Exposure index 30-60 days before (log)	Logarithmic transformation of the index of exposure to immigrants' arrivals calculated between 30 and 60 days preceding the election
Exposure index 60-90 days before (log)	Logarithmic transformation of the index of exposure to immigrants' arrivals calculated between 60 and 90 days preceding the election
Exposure index 0-60 days before (log)	Logarithmic transformation of the index of exposure to immigrants' arrivals calculated between the election day and 60 days preceding the election
Exposure index 0-90 days before (log)	Logarithmic transformation of the index of exposure to immigrants' arrivals calculated between the election day and 90 days preceding the election
Share of household with annual income > 120k	Share of citizens with annual personal income greater than 120 thousand at municipal level
Total SPRAR beds	Total number of available beds in SPRAR centers at province level
Total SPRAR beds (log)	Logarithmic transformation of the total number of available beds in SPRAR centers at province level
Ageing index	Index of age structure at municipal level, calculated as the ratio between the share of elder individuals (i.e. over 65 years) and the share of pupils and children (i..e from 0 to 14 years)
Share of migrants	Share of non-native population with respect to the total resident population, at municipal level
Share of migrants (log)	Logarithmic transformation of Share of migrants
No. of reported crimes per electorate	Number of crimes reported to the police at province level (NUTS3), divided by electorate (at municipal level).
Crimes per electorate I tertile	Dummy variable taking value 1 if the province number of crimes per electorate is in the first tertile of the regional annual distribution, 0 otherwise.

Crimes per electorate II tertile	Dummy variable taking value 1 if the province number of crimes per electorate is in the second tertile of the regional annual distribution, 0 otherwise.
Crimes per electorate III tertile	Dummy variable taking value 1 if province number of crimes per electorate is in the third tertile of the regional annual distribution, 0 otherwise.
News diffusion per electorate	Annual average of the total number of newspapers daily sold at province level, divided by electorate (at municipal level).
News diffusion per electorate, above median value	Dummy variable taking value 1 if the province has a number news diffusion per electorate greater than the median value, calculated by year at regional level (NUTS2), 0 otherwise.
Umployment rate	Annual unemployment rate of the working age population (i.e. individuals aged 15 and over) computed at province level (NUTS3)
Umployment I tertile	Dummy variable taking value 1 if the province unemployment rate is in the first tertile of the regional annual distribution, 0 otherwise
Umployment II tertile	Dummy variable taking value 1 if the province unemployment rate is in the second tertile of the regional annual distribution, 0 otherwise
Umployment III tertile	Dummy variable taking value 1 if the province unemployment rate is in the third tertile of the regional annual distribution, 0 otherwise
Share of household with 2<ADS<=30 Mbps	Share of household with average download speed (ADS) between 2 and 30 Mbps at province level (NUTS3)
Share of household with 30<ADS<=100 Mbps	Share of household with average download speed between 30 and 100 Mbps at province level (NUTS3)
Share of household with 100<ADS<=500 Mbps	Share of household with average download speed between 100 and 500 Mbps at province level (NUTS3)

Table A2 – Exposure to arrivals and turnout: the role of crime

	(1)	(2)	(3)
	Crimes per voter (region/year)		
	1st tertile	2nd tertile	3rd tertile
	Panel A: Turnout		
Exposure index 30 days before (log)	-0.004	-0.005	-0.001
	(0.003)	(0.004)	(0.005)
Observations	1,837	1,785	1,774
R-squared	0.672	0.461	0.362
Number of municipalities	961	969	923
	Panel B: Protest votes		
Exposure index 30 days before (log)	0.003*	0.002	-0.001
	(0.002)	(0.004)	(0.004)
Observations	1,837	1,785	1,774
R-squared	0.171	0.063	0.121
Number of municipalities	961	969	923
	Panel C: Anti-immigration votes		
Exposure index 30 days before (log)	0.008***	0.003	0.003
	(0.003)	(0.004)	(0.005)
Observations	1,837	1,785	1,775
R-squared	0.138	0.037	0.047
Number of municipalities	961	969	923
	Panel D: Populist votes		
Exposure index 30 days before (log)	0.021***	0.003	0.003
	(0.005)	(0.005)	(0.005)
Observations	1,837	1,785	1,775
R-squared	0.240	0.046	0.033
Number of municipalities	961	969	923
	Panel E: Northern-league votes		
Exposure index 30 days before (log)	0.008	0.005	0.004
	(0.009)	(0.010)	(0.010)
Observations	767	751	746
R-squared	0.202	0.077	0.082
Number of municipalities	403	409	388

Table A3 – Exposure to arrivals and votes for extreme-right parties: the role of municipalities' characteristics – population size

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Dependent Variables:	Turnout		Protest votes		Share of vote for anti-immigration parties		Share of vote for populist parties		Share of vote for Northern League	
	≤90th pc	>90th pc	≤90th pc	>90th pc	≤90th pc	>90th pc	≤90th pc	>90th pc	≤90th pc	>90th pc
Exposure index 30 days before (log)	-0.005**	0.004	-0.001	0.002	0.008***	-0.002	0.013***	-0.001	0.015**	-0.027
	(0.002)	(0.003)	(0.002)	(0.002)	(0.003)	(0.005)	(0.003)	(0.011)	(0.007)	(0.023)
Total SPRAR beds	0.000	0.000	-0.000**	0.000	0.000***	0.000*	-0.000	-0.000	0.000**	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Share of migrants	0.003	-0.084	0.044	0.020	-0.006	0.155***	0.019	0.032	-0.078	-0.010
	(0.038)	(0.056)	(0.036)	(0.029)	(0.034)	(0.050)	(0.045)	(0.117)	(0.062)	(0.131)
Number of mayors	0.011***	0.001	0.001	-0.005***	-0.002	-0.002*	0.001	-0.005***	-0.007**	-0.007***
	(0.002)	(0.001)	(0.000)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.003)	(0.002)
Taxable income share > 120,000	-0.081	-0.974***	0.606***	0.020	-0.090	1.563**	-0.141	2.089***	-0.170	1.098
	(0.071)	(0.332)	(0.210)	(0.031)	(0.124)	(0.613)	(0.135)	(0.719)	(0.178)	(1.143)
Constant	0.582***	0.623***	0.028	0.063***	0.045***	0.011	0.047***	0.169***	0.102***	0.187**
	(0.008)	(0.027)	(0.017)	(0.005)	(0.007)	(0.037)	(0.009)	(0.061)	(0.019)	(0.084)
Observations	4,917	479	479	4,917	4,918	479	4,918	479	2,058	206
R-squared	0.397	0.831	0.615	0.032	0.036	0.381	0.029	0.625	0.075	0.484
Number of municipalities	2,470	244	244	2,470	2,470	244	2,470	244	1,036	105

Robust standard errors in parentheses clustered at province level. All models include year dummies.
*** p<0.01, ** p<0.05, * p<0.1

Table A4 – Exposure to arrivals and votes for extreme-right parties: the role of the labor market

	(1)	(2)	(3)
	Unemployment (region/year)		
	1st tertile	*2nd tertile*	*3rd tertile*
		Panel A: Turnout	
Exposure index 30 days before (log)	-0.005	0.001	-0.000
	(0.004)	(0.006)	(0.004)
Observations	2,407	1,848	1,141
R-squared	0.393	0.393	0.422
Number of municipalities	1,551	1,446	897
		Panel B: Protest votes	
Exposure index 30 days before (log)	0.002	0.001	0.000
	(0.002)	(0.005)	(0.002)
Observations	2,407	1,848	1,141
R-squared	0.028	0.051	0.068
Number of municipalities	1,551	1,446	897
		Panel C: Anti-immigration votes	
Exposure index 30 days before (log)	0.007*	0.007***	0.021**
	(0.004)	(0.002)	(0.009)
Observations	2,408	1,848	1,141
R-squared	0.054	0.099	0.144
Number of municipalities	1,551	1,446	897
		Panel D: Populist votes	
Exposure index 30 days before (log)	0.010**	0.019***	0.036***
	(0.004)	(0.005)	(0.010)
Observations	2,408	1,848	1,141
R-squared	0.078	0.199	0.180
Number of municipalities	1,551	1,446	897
		Panel E: Northern-league votes	
Exposure index 30 days before (log)	0.014	0.014**	0.011
	(0.014)	(0.007)	(0.010)
Observations	882	831	551
R-squared	0.075	0.160	0.413
Number of municipalities	585	674	452

Table A5 – Exposure to arrivals and votes for extreme-right parties: the role of competition for public services

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Dependent Variables:	Turnout		Protest votes		Share of vote for anti-immigration parties		Share of vote for populist parties		Share of vote for Northern League	
	≤median	>median	≤median	>median	≤median	>median	≤median	>median	≤median	>median
Exposure index 30 days before (log)	-0.003	-0.005*	0.002	0.001	0.009**	0.009***	0.019***	0.015***	0.016*	0.013*
	(0.003)	(0.003)	(0.002)	(0.002)	(0.004)	(0.003)	(0.005)	(0.004)	(0.009)	(0.007)
Total SPRAR beds	0.000*	0.000*	-0.000**	-0.000	-0.000	0.000***	-0.000*	-0.000	-0.000*	0.000**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Share of migrants	0.042	-0.029	0.038	0.010	0.023	-0.004	0.023	0.060	-0.072	-0.087
	(0.057)	(0.043)	(0.036)	(0.036)	(0.028)	(0.063)	(0.047)	(0.088)	(0.061)	(0.173)
Electorate	0.000**	0.000	-0.000	-0.000**	0.000	0.000	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Number of mayors	0.010***	0.005***	-0.001	-0.006***	-0.000	-0.003**	-0.003	-0.001	-0.002	-0.011***
	(0.002)	(0.002)	(0.001)	(0.002)	(0.001)	(0.001)	(0.003)	(0.002)	(0.002)	(0.003)
Taxable income share > 120,000	-0.136	-0.179*	0.022	0.062	-0.109	0.045	-0.131	-0.075	-0.186	-0.099
	(0.086)	(0.093)	(0.053)	(0.044)	(0.137)	(0.282)	(0.142)	(0.303)	(0.201)	(0.416)
Constant	0.505***	0.608***	0.063***	0.134***	-0.006	0.014	0.019	0.022	0.054	-0.080
	(0.030)	(0.026)	(0.012)	(0.033)	(0.027)	(0.046)	(0.072)	(0.088)	(0.050)	(0.136)
Observations	2,716	2,680	2,680	2,716	2,716	2,681	2,716	2,681	1,138	1,126
R-squared	0.394	0.455	0.032	0.050	0.035	0.053	0.046	0.070	0.077	0.106
Number of municipalities	1,538	1,516	1,516	1,538	1,538	1,517	1,538	1,517	643	635

Robust standard errors in parentheses clustered at province level. All models include year dummies.
*** p<0.01, ** p<0.05, * p<0.1

Table A6 – Exposure to arrivals and share of populist votes – Alternative definition

	(1)	(2)	(3)	(4)
	Dependent Variable: *Share of votes for populist parties*			
Exposure index (log)	0.016***			
	(0.003)			
Exposure index 30 days before (log)		0.011***		
		(0.003)		
Exposure index 30-60 days before (log)			0.009***	
			(0.002)	
Exposure index 60-90 days before (log)				0.007**
				(0.003)
Total SPRAR beds	-0.000	-0.000	-0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Share of migrants	-0.018	-0.015	-0.002	0.013
	(0.035)	(0.034)	(0.037)	(0.039)
Electorate	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Number of mayors	-0.001	-0.001	-0.001	-0.001
	(0.001)	(0.001)	(0.001)	(0.001)
Taxable income share > 120,000	-0.160	-0.156	-0.158	-0.157
	(0.123)	(0.123)	(0.123)	(0.123)
Ageing index	-0.005***	-0.005***	-0.005***	-0.005***
	(0.002)	(0.002)	(0.002)	(0.002)
Constant	0.086**	0.085**	0.088**	0.087**
	(0.036)	(0.037)	(0.036)	(0.036)
Observations	5,397	5,397	5,397	5,397
R-squared	0.034	0.034	0.031	0.030
Number of municipalities	2,706	2,706	2,706	2,706

Robust standard errors in parentheses clustered at province level. All models include year dummies.
*** p<0.01, ** p<0.05, * p<0.1

Table A7 – Exposure to arrivals and share of populist votes – Alternative definition

	(1)	(2)	(3)	(4)
	Dependent Variable: *Share of votes for populist parties*			
Exposure index (log)	0.016***			
	(0.003)			
Exposure index 30 days before (log)		0.011***		
		(0.003)		
Exposure index 30-60 days before (log)			0.009***	
			(0.002)	
Exposure index 60-90 days before (log)				0.008**
				(0.003)
Total SPRAR beds	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Share of migrants	-0.011	-0.008	0.006	0.020
	(0.035)	(0.034)	(0.038)	(0.039)
Electorate	-0.000	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Number of mayors	-0.001	-0.001	-0.001	-0.001
	(0.001)	(0.001)	(0.001)	(0.001)
Taxable income share > 120,000	-0.157	-0.153	-0.155	-0.154
	(0.122)	(0.122)	(0.123)	(0.123)
Ageing index	-0.005**	-0.004**	-0.005**	-0.005**
	(0.002)	(0.002)	(0.002)	(0.002)
Constant	0.083**	0.083**	0.086**	0.084**
	(0.037)	(0.037)	(0.037)	(0.037)
Observations	5,397	5,397	5,397	5,397
R-squared	0.037	0.037	0.034	0.033
Number of municipalities	2,706	2,706	2,706	2,706

Robust standard errors in parentheses clustered at province level. All models include year dummies.
*** p<0.01, ** p<0.05, * p<0.1

Table A8 – Exposure to arrivals and electoral outcomes – Elasticities

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Dependent variables.:	Turnout (log)		Protest votes (log)		Share of vote for anti-immigration parties (log)		Share of vote for populist parties (log)		Share of vote for Northern League (log)	
Exposure index (log)	-0.016***		0.005**		0.008***		0.020***		0.012*	
	(0.006)		(0.002)		(0.002)		(0.004)		(0.007)	
Exposure index 30 days before (log)		-0.010**		0.002		0.007***		0.013***		0.013**
		(0.004)		(0.001)		(0.002)		(0.003)		(0.005)
Total SPRAR beds (log)	0.008***	0.008***	-0.001	-0.001	0.003**	0.003**	0.002	0.002	0.003	0.003
	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.003)	(0.003)
Share of migrants (log)	0.062	0.047	0.012	0.020	0.034	0.022	0.033	0.043	-0.041	-0.062
	(0.093)	(0.097)	(0.029)	(0.031)	(0.030)	(0.030)	(0.046)	(0.045)	(0.054)	(0.055)
Electorate	0.000	0.000	-0.000**	-0.000**	0.000	0.000	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Number of mayors	0.012***	0.013***	-0.003***	-0.003***	-0.001*	-0.002*	-0.001	-0.001	-0.005***	-0.005***
	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Taxable income share > 120,000	-0.170	-0.175	0.020	0.021	-0.052	-0.051	-0.111	-0.106	-0.123	-0.120
	(0.133)	(0.134)	(0.029)	(0.029)	(0.104)	(0.104)	(0.113)	(0.112)	(0.151)	(0.149)
Ageing index	-0.001	-0.001	0.003**	0.003**	-0.004***	-0.004***	-0.005***	-0.005***	-0.004**	-0.004**
	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)
Constant	-0.590***	-0.592***	0.073***	0.074***	0.024	0.023	0.050	0.051	0.088***	0.080***
	(0.033)	(0.033)	(0.011)	(0.011)	(0.021)	(0.021)	(0.043)	(0.044)	(0.027)	(0.026)
Observations	5,396	5,396	5,396	5,396	5,397	5,397	5,397	5,397	2,264	2,264
R-squared	0.365	0.364	0.043	0.042	0.049	0.051	0.056	0.056	0.087	0.091
Number of municipalities	2,706	2,706	2,706	2,706	2,706	2,706	2,706	2,706	1,137	1,137

Robust standard errors in parentheses clustered at province level. All models include year dummies.
*** p<0.01, ** p<0.05, * p<0.1

Table A9a – Exposure to arrivals and votes for extreme-right parties – Alternative time-windows

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent variables:	Turnout			Protest votes		
Exposure index 30 days before (log)	-0.005**			0.003		
	(0.002)			(0.002)		
Exposure index 0-60 days before (log)		-0.006**			0.004**	
		(0.002)			(0.002)	
Exposure index 0-90 days before (log)			-0.006***			0.004**
			(0.002)			(0.002)
Observations	5,396	5,396	5,396	5,396	5,396	5,396
R-squared	0.414	0.415	0.415	0.039	0.040	0.041
Number of municipalities	2,706	2,706	2,706	2,706	2,706	2,706

Robust standard errors in parentheses clustered at province level. All models include year dummies.
*** p<0.01, ** p<0.05, * p<0.1

Table A9b – Exposure to arrivals and votes for extreme-right parties – Alternative time-windows

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Dependent variables:	Anti-immigration votes			Populist votes			Northern-league votes		
Exposure index 30 days before (log)	0.009***			0.016***			0.015**		
	(0.002)			(0.003)			(0.006)		
Exposure index 0-60 days before (log)		0.007***			0.017***			0.012*	
		(0.002)			(0.003)			(0.006)	
Exposure index 0-90 days before (log)			0.006***			0.017***			0.011*
			(0.002)			(0.003)			(0.006)
Observations	5,397	5,397	5,397	5,397	5,397	5,397	2,264	2,264	2,264
R-squared	0.045	0.043	0.042	0.055	0.054	0.053	0.084	0.081	0.080
Number of municipalities	2,706	2,706	2,706	2,706	2,706	2,706	1,137	1,137	1,137

Robust standard errors in parentheses clustered at province level. All models include year dummies.
*** p<0.01, ** p<0.05, * p<0.1